Maintenance Manual of Chery A113

(Body Accessories & Dimensions)

After Sales Service Department of Chery Automobile Sales Co., Ltd

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Chapter I Front Hood & Trunk

I. Removal and Installation of Front Hood

1. Preparations

Tools: Flat head/cross head screwdriver, socket wrench, snipe nose pliers

2. Notes

2.1. During removal and installation, be particularly careful to apply proper strength and no abrupt or violent operation is allowed.

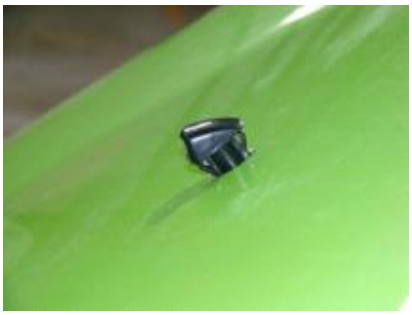
2.2. During removal and installation of the trims, be particularly careful to avoid surface scratch of them.

3. Removal and Installation of Front Hood Accessories

3.1. Removal Steps

3.1.1. Pull off the detergent hose.

3.1.2. Press down the water nozzle clip from under the front hood, and then push it up while removing the noozle outward.



3.2. Installation Steps

The installation steps are reverse to those for removal.

4. Removal & Adjustment of of Front Hood Assembly

Preparation of Tools: 13# sleeve, wheel wrench and extension bar
4.1. Turn and remove the four adjusting bolts off the front hood, and then the front hood can be taken down. And the positing of the front hood can be adjusted in all directions by loosening the four adjusting bolts.

4.2. Installation of Front Hood Assembly:
The installation steps are reverse to those for removal.
Installation torque is 29±3Nm

5. Removal and Installation of Air Inlet Grid Assembly

5.1. Removal Steps

5.1.1. Use the wrench to remove the four fastening screws on the Air Inlet Grid assembly as shown in the picture.

5.1.2. Remove the Air Inlet Grid.

5.2. Installation Steps

The installation steps are reverse to those for removal.
Installation torque is 5±0.5Nm

6. Removal of Front Hood Lock

6.1. Removal Steps

6.1.1. Turn and remove two screws off the front hood to take down its lock.

6.1.2. Remove the front hood lock cable off the front hood lock assembly.

6.2. Installation Steps

The installation steps are reverse to those for removal.

7. Removal & Adjustment of of Hood Cable

7.1. Removal & Adjustment of Steps
7.1.1. Remove the plastic nut behind the front hood handle in driver's cab.And you can also regulate the cable by adjusting this nut.

7.1.2. Use snipe nose pliers to remove the front hood cable off the pull cover.

7.1.3. Drag out the cable.

7.2. Installation Steps

The installation steps are reverse to those for removal.

II. Removal of Rear Trunk Cover

1. Preparations

Tools: flat head screwdriver, 13# sleeve, wrench and cross head screwdriver
Material(s): Clip

2. Removal of Rear Decoration Plate

2.1. Pry up the rear decoration plate with a flat head screwdriver before you take it apart.

2.2. Installation of Rear Decoration Plate
The installation steps are reverse to those for removal.

3. Removal and Installation of Trunk Lock

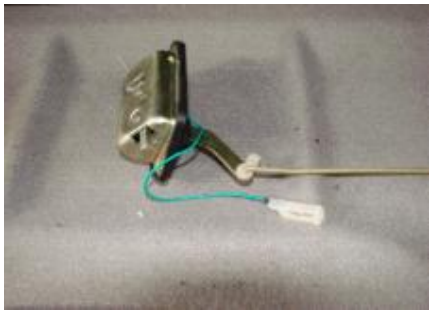
3.1. Removal Steps

3.1.1. Remove the pull rod off the upper lock.

3.1.2. Pull off the connector on top of the upper lock.

3.1.3. Use a cross head screwdriver to remove the three screws on the upper lock.

3.1.4. Remove the trunk lock.



3.2. Installation Steps

The installation steps are reverse to those for removal.
Installation notes: Is the lock column deformed? Is the riveting adequate? Is the lock jacket on the trunk in good condition? Or can the lock tongue open and shut freely?

4. Removal of Trunk Lock Cylinder

4.1. Removal Steps

4.1.1. Disengage the hitch bar from the lock core.

4.1.2. Pry open the clip on the lock core with a flat head screwdriver.

4.1.3. Push up the lock core to take it out.
Note: Do not throw away the washer of the lock core.

4.2. Installation Steps

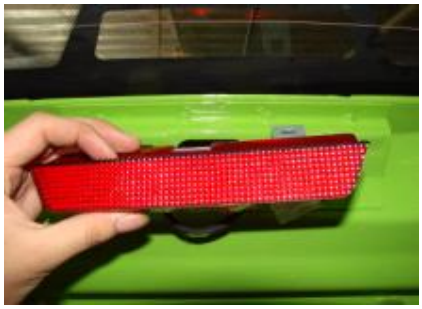
The installation steps are reverse to those for removal.
Pay attention to assemble it to its correct position and joint to door plate work.

5. Removal of Rear Wiper Nozzle

5.1. Removal Steps

5.1.1. Pry open the shield of the high mount ceiling light with a flat head screwdriver.

5.1.2. Pull off the connector, and then use a cross head screwdriver to remove the two screws on the high mount ceiling light and take it down.



5.1.3. Remove the two nuts on the spoiler with 10# sleeve.

5.1.4. Remove the spoiler.

5.1.5. Pull off the rear water nozzle (You can pry with a flat head screwdriver, but try to avoid any paint scratch), and then pull off the water nozzle hose.

5.2. Installation Steps

The installation steps are reverse to those for removal.
Note: Water injection opening should be opposite to wiper motor steering shaft.

6. Removal of Rear Wiper Motor

6.1. Removal Steps

6.1.1. Remove the rear wiper shield by hand.

6.1.2. Use a 10# sleeve wrench to loosen off the nut above the motor, and remove the rear wiper blade.
Installation torque is 12±2Nm

6.1.3. Remove the three fixing bolts on the rear wiper motor. Installation torque is 12±2Nm

6.1.4. Remove the motor.

6.2. Installation Steps

The installation steps are reverse to those for removal.

Chapter II Removal of Trims

I. Removal and Installation of Seat belts

1. Preparations

Tools: flat head screwdriver, wrench, sleeve wrench
Spare parts: disposable clip

2. Notes

Keep the seat belts clean and free of oil, and check them for any damage.

3. Removal Steps (Take Driver's Seat belt as an Example)

3.1. Carefully pry up the front sill plate with a flat head screwdriver.

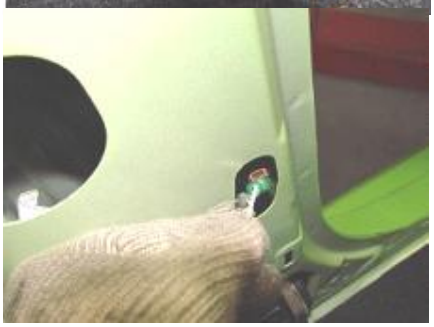
3.2. Remove the front door weather strip by hand.

3.3. Remove the B-pillar plate with a flat head screwdriver.

3.4. Remove the decorative covers at the upper and lower ends of the seat belt with a flat head screwdriver.

3.5. Use a 17# wrench to loosen the upper and lower fastening nuts before you remove the seat belt.
Installation Torque: 50±5Nm

3.6. Pull off the seat belt warning light connector by hand.



3.7. Use a cross head screwdriver to remove the pre-tension belt assembly.

4. Installation Steps

The installation steps are reverse to those for removal.
Note:
4.1. Keep the seat belt clean and free of oil, and check it for any damage.
4.2. The pillar shield should fit securely with the vehicle body without any looseness, and it should also fit well with the vehicle ceiling and weather strip s.
4.3. The seat belt adjusting slide baffle of the upper B-pillar shield should be able to move freely and won't affect the adjustment of the seat belt, and its fitting clearance with the lower shield should be consistent and less than 1mm;
4.4. The fitting clearance between the lower B-pillar shield and the front/rear sill plate should be consistent and less than 1mm;

II. Removal and Installation of Seats

Preparation of Tools: sleeve wrench

1. Removal of Front Seats

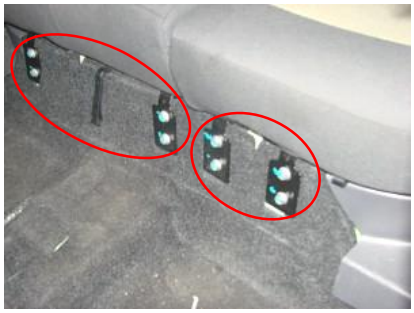
1.1. Move the seat by pulling at the movable handle below it, and when the fixing bolts are shown, use a 13# socket wrench to remove the bolts in the seat.
Torque: 25±3Nm

1.2. Pull off the seat connector and raise the seat.

2. Removal of Rear Seats

2.1. Use a 13# socket wrench to remove the fixing bolts in the rear seat cushion.
Torque: 25±3Nm

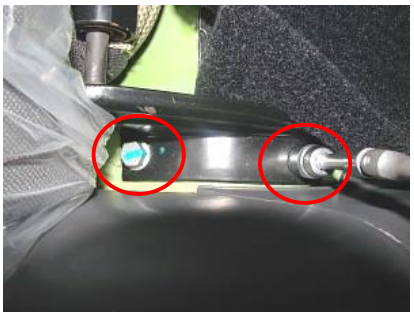
2.2. There are two rear seat cushions, a left one and a right one, secured by four bolts respectively.
Torque: 25±3Nm



2.3. The cushion can be dismounted when the four fixing bolts are removed.

2.4. Pull up the pull button in the rear seat and the seat back can be released forward (Take the left-rear seat as an example).

2.5. Use a 13# socket wrench to loosen off the two fixing bolts below the seat back (Take the left-rear seat as an example).
Torque: 25±3Nm



2.6. Open the trunk and take out the trunk vehicle carpet.

2.7. Loosen off the fixing seat of the spare tire and take it out.

2.8. Use a 13# socket wrench to loosen off the fixing bolts in the rear seat back, and then the rear seat back can be removed.
Torque: 25±3Nm

3. Installation Steps

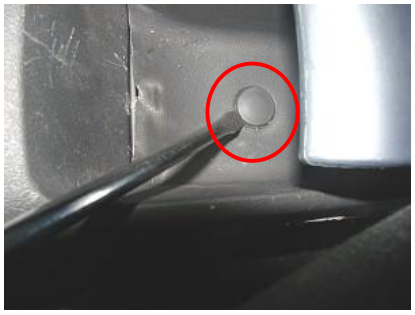
The installation steps are reverse to those for removal.

III. Removal and Installation of auxiliary Instrument Panel

Preparation of Tools: cross head screwdriver, flat head screwdriver

1. Removal Steps

1.1. Use a flat head screwdriver to pry open the shield at the hand brake and gears.



2.6. Open the trunk and take out the trunk vehiclepet.

2.7. Loosen off the fixing seat of the spare tire and take it out.

2.8. Use a 13# socket wrench to loosen off the fixing bolts in the rear seat back, and then the rear seat back can be removed.
Torque: 25±3Nm

3. Installation Steps

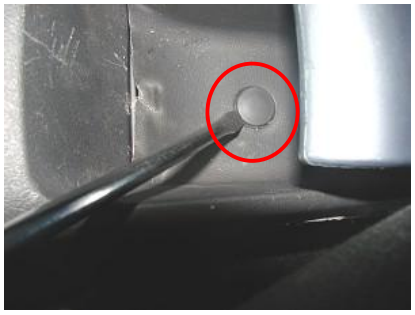
The installation steps are reverse to those for removal.

III. Removal of auxiliary Instrument Panel

Preparation of Tools: cross head screwdriver, flat head screwdriver

1. Removal Steps

1.1. Use a flat head screwdriver to pry open the shield at the hand brake and gears.



1.2. Use a cross head screwdriver to loosen off the fixing screws of the shield

1.3. Use a flat head screwdriver to pry open the shield at the hand brake and gears.
Note: Please pry carefully.

1.4. Use a cross head screwdriver to remove the two fixing screws below the shield.

1.5. Take out the gear selector shield upward by hand (The shield and the auxiliary Instrument Panel are fixed with clips and no fixing screws are used).

1.6. Use a cross head screwdriver to remove the front fixing screws of the auxiliary Instrument Panel (One on the left and the other one the right).

1.7. Use a cross head screwdriver to remove the rear fixing screws of the auxiliary Instrument Panel (One on the left and the other one the right), and then the suxiliary Instrument Panel can be dismounted.

2. Installation Steps

The installation steps are reverse to those for removal.

IV. Removal and Installation of Vehicle Carpet

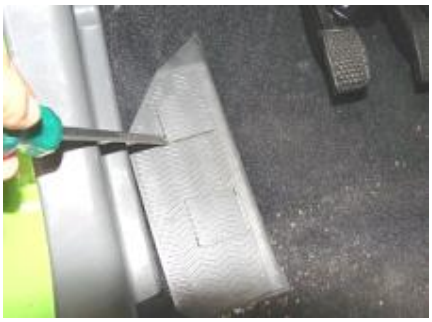
Tools: flat head screwdriver, cross head screwdriver; sleeve wrench

1. Removal Steps

1.1. Dismount the seats. (See Removal of Seat)
1.2. Disassemble the auxiliary Instrument Panel (See Removal of auxiliary Instrument Panel)
1.3. Remove the seat belt shield. (See Removal of Seat belt)
1.4. Remove the front/rear sill plates, B pillar and the lower shield.

1.5. Use a flat head screwdriver to pry up the top cover of footrest plate.

1.6. Use a 10# wrench to remove the footrest plate covers
Installation Torque: 7±1N.m



1.7. Remove the rear seat cushion (See Removal of Seats)
Use a cross head screwdriver to remove the left shield of the rear seat cushion.

1.8. Take down the vehicle vehicle carpet by hand.

2. Installation Steps

2.1. Put the vehicle vehicle carpet inside the vehicle, and take out the harness connected with the seats, and then press the vehicle vehicle carpet besideds the middle passage tightly.

2.2. Keep the seat holes visible.

2.3. Spread the vehicle vehicle carpet till it gets to the footrest plate and press it tightly.

2.4. Spread the left-rear part of the vehicle vehicle carpet according to the shape of the vehicle floor, keep the installation holes of the left-rear seats visible, and spread and press the rear part of the vehicle vehicle carpet according to the shape of the vehicle floor.

V. Removal of Damping Mat

1. Removal Steps

1.1. Remove the vehicle vehicle carpet (See Removal of Vehicle Vehicle carpet).

1.2. Take down each damping mat.

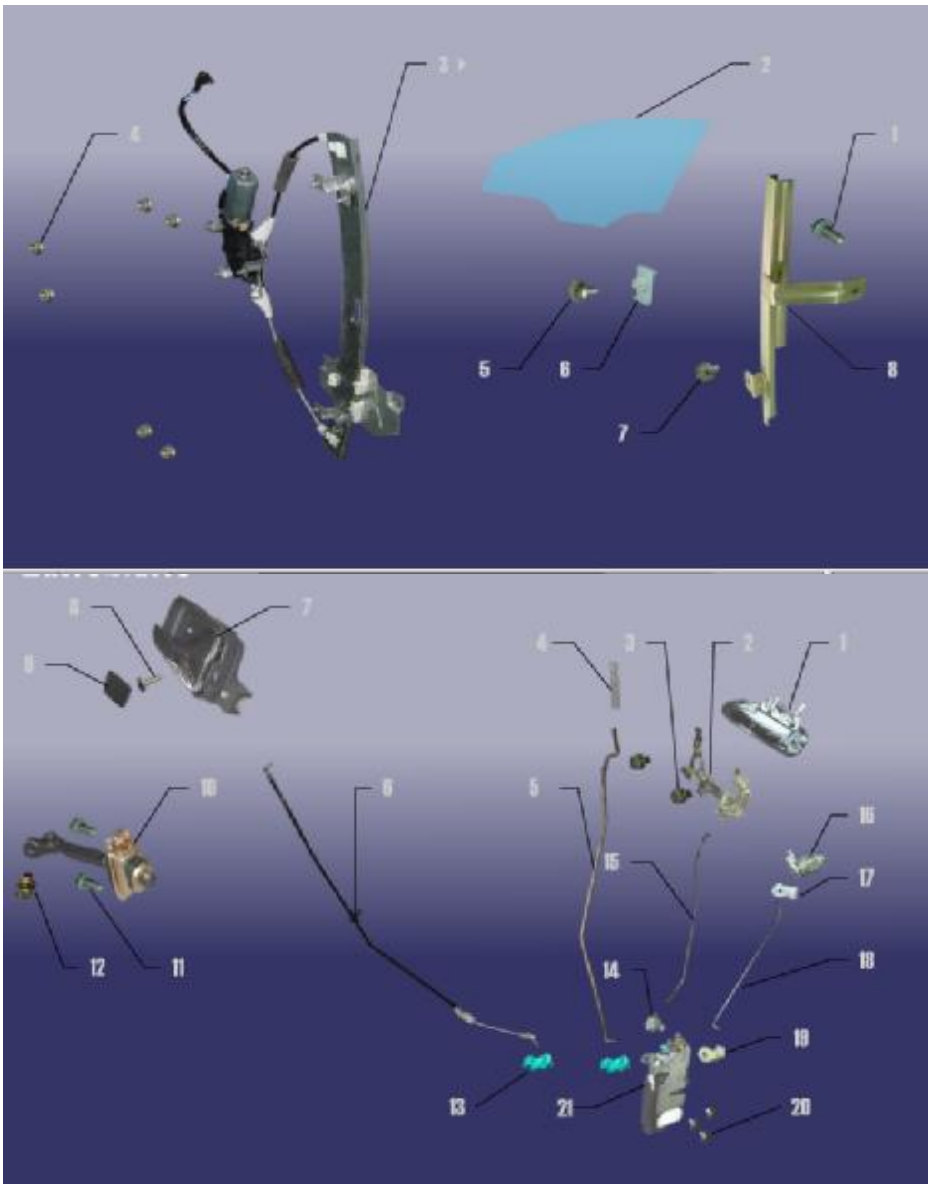
2. Installation Steps

2.1. The installation steps are reverse to those for removal.
2.2. Notes: When installing, sort out the harness, and at the same time the damping mat should fit well with the vehicle body plate work.

Chapter III Removal & Maintenance of Vehicle Doors

I. Removal, Installation & Maintenance of Front Doors

1. System Constitution Diagram



2. Preparations

Tools: flat head screwdriver, cross head screwdriver, 10#, 13# sleeve, wrench and pliers.

3. Notes

3.1. Please wear necessary labour protection supplies to avoid any accident.
3.2. Disconnect the battery to avoid damaging the eletrical equipment.
3.3 Use the correct method to disassemble and assemble the glass to avoid damage.

4. Removal Steps

4.1. Remove the left-front vehicle door weather strip. The fixing clip of the vehicle door weather strip are "-" shaped, and when disassembling it, press the weather strip downward, and then push the weather strip to one side till you can see part of the clip. And go on to push it to the opposite direction to show another part of it. Don't pull the weather strip vertically so as not to damage the weather strip.

4.2. Use a flat head screwdriver to pry up the plastic decorative block fixing the rearview mirror outside the vehicle door.

4.3. Use a 10# sleeve wrench to loosen off the two screws fixing the outside rearview mirror.

4.4. Pull off the electrically-adjustable outside rearview mirror harness connector and take off the outside rearview mirror assembly.

4.5. Use a cross head screwdriver to loosen off the four screws that fix the shield inside the door.

4.6. Use a cross head screwdriver to loosen off the screw that fixes the handle inside the vehicle door.

4.7. Use a flat head screwdriver to pry off the plastic cover of the screw hole for the handle inside the vehicle door, and then remove the fixing screw with a cross head screwdriver so as to disassemble the lock assembly inside the door.

4.8. Pull of the vehicle alarm connector.

4.9. Remove the shield inside the door.

4.10. Pull off the power window up-down switch connector.

4.11. Use a cross head screwdriver to loosen off the two screws of the front door handle fixing mount.

4.11. Tear off the anti-water plastic sheeting on the left-front door.

4.12. Connect the battery and plug in the window up-down switch plug, lower the window glass to a proper position and loosen off the two screws that fix the glass.

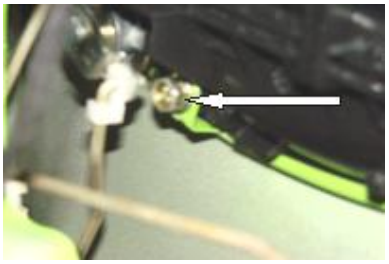
4.13. Take out the glass carefully.

4.14. Use a 10# sleeve to loosen off the five screws that fix the window glass up-down regulator.

4.15. Loosen off the screws, and then pull off the window glass up-down motor connector to take out the window glass up-down regulator assembly.

4.16. Use a 10# sleeve wrench to loosen off the two fixing screws and remove the lock outside the door.

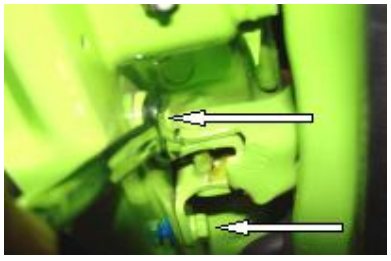
4.17. Use a cross head screwdriver to loosen off the three screws fixing the lock core and remove it.

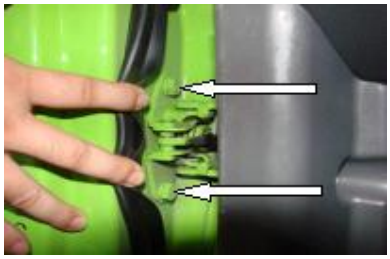


4.18. Use a 13# sleeve wrench to loosen off the four fixing screws at the hinge that fixes the vehicle door, and then the vehicle door can be disassembled.

5. Installation Steps

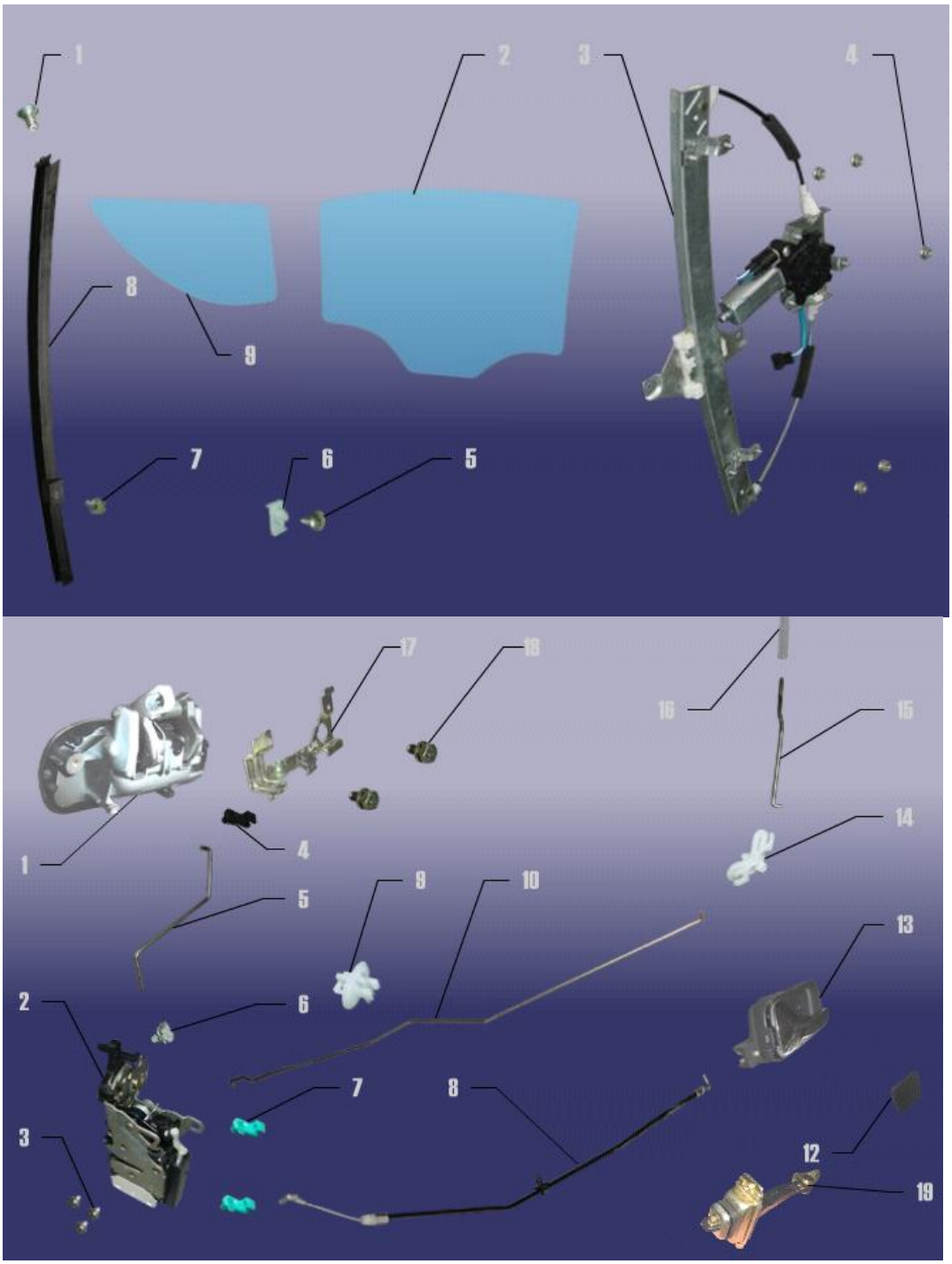
The installation steps are reverse to those for removal.
Note: The removal steps for the right-front door are the same as those for the left-front door.





II. Removal & Installation of Rear Doors

1. System Constitution Diagram



2. Preparations

Tools: flat head screwdriver, cross head screwdriver, and 10# / 13# sleeve, wrench.

3. Notes

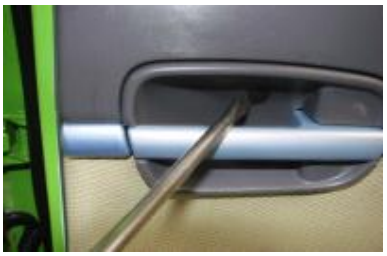
3.1. Please wear necessary labor protection supplies to avoid accidents.
3.2. Disconnect the battery so as to avoid damaging the eletrical equipment.
3.3. Take correct steps during removal and installation of glass to avoid any damage.

4. Removal Steps

4.1. Disassemble the right-rear door weather strip. The fixing clip of the vehicle door weather strip are "-" shaped, and when disassembling it, press the weather strip downward, and then push the weather strip to one side till you can see part of the clip. And go on to push it to the opposite direction till another corner of it is exposed. Don't pull the weather strip vertically so as not to damage the weather strip.

4.2. Use a cross head screwdriver to loosen off the four screws that fix the shield inside the door.

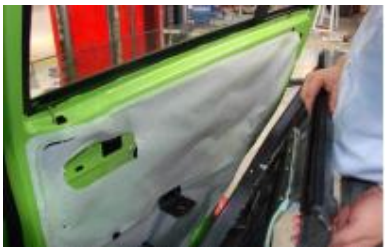
4.3. Use a flat head screwdriver to pry off the plastic cover of the screws that fix the handle inside the vehicle door.



4.4. Use a cross head screwdriver to loosen off the screws that secure the handle inside the door, and then disassemble it.

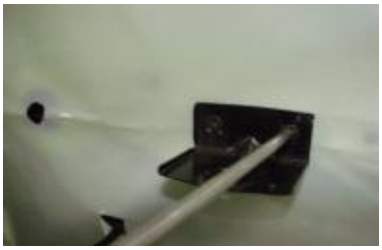
4.5. Use a cross head screwdriver to loosen off the screws that secure the handle inside the vehicle door, and then disassemble the handle inside the door.

4.6. Disassemble the shield inside the door by hand.



4.7. Pull off the power window up-down switch connector.

4.8. Use a cross head screwdriver to remove the two fixing screws in the mount that fixes the rear door handle cover.

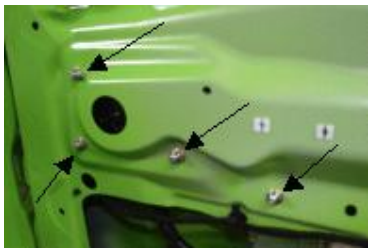


4.9. Tear off the anti-water plastic sheeting on the rear door.

4.10. Connect the battery, lower the window glass to a proper position and loosen off the two screws that fix the glass, and then carefully diassemble the glass.

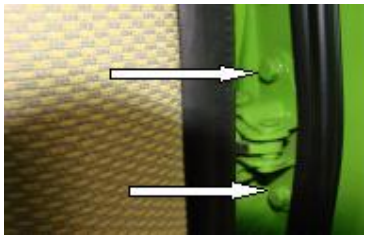
4.11. Use a 10# wrench to loosen off the five screws that fix the window up-down regulator and remove it.

4.12. Use a 10# sleeve wrench to loosen off the screw that fix the handle outside the rear door and then remove it.



4.13. Use a cross head screwdriver to loosen off the three screws that fix the rear door lock core and then remove it.

4.14. Use a 13# sleeve wrench to loosen off the four screws (at the hinge) that fix the right-rear vehicle door and then remove it.



5. Installation Steps

The installation steps are reverse to those for removal.
Note: Removal of the left-rear door is similar to that of the right-rear door.

Chapter IV Removal, Installation & Maintenance of Front/Rear Bumper

I. Removal, Installation & Maintenance of Front Bumper

1. Preparations

Tools: 8# wrench, 8#sleeve, cross head screwdriver, flat head screwdriver
Spare parts: disposable clips

2. Notes

2.1. Please wear necessary labor protection supplies to avoid accidents.
2.2. Try to avoid scratching the painted surface of the bumper during the removal operation.
2.3. For removal in colder environment, operate gently to avoid damaging the bumper.

3. Removal Steps

(Take the left side as an example)
3.1 Open the Front Hood.
3.2 Remove the headlights. (See Removal and Installation of Headlights)
3.3 Use a cross head screwdriver to loosen off the four screws on the grid fence.

3.4. Use a 8# sleeve wrench to loosen off the two bolts on the bumper and the left wing sheet.
Torque: 11N • m

3.5. Use a cross head screwdriver to loosen off the 7 screws on the bumper and the front compartment member.

3.6. Use a 8# sleeve wrench and a cross head screwdriver to loosen off the screws and fixing screws below the mud fender and the bumper.
Installation Torque: 2±0.5 Nm

3.7 Raise the vehicle with a hoister.
3.8. Use a cross head screwdriver and 8#sleeve to loosen off the fixing bolts and the screws below the mud fenderand the bumper.
Installation Torque: 2±0.5N.m

3.9. Pull off the fog lights connector.

3.10. Remove the bumper.

4. Installation Steps

The installation steps are reverse to those for removal.

II. Removal, Installation & Maintenance of Rear Bumper

1. Preparations

Tools: cross head screwdriver, flat head screwdriver, No.8 sleeve.
Spare parts: disposable clips.

2. Notes

2.1. Please wear necessary labor protection supplies to avoid accidents.
2.2. Try to avoid scratching the painted surface of the bumper when removing it.
2.3. When removing the bumper in colder environment, operate gently to avoid damaging it.

3. Removal Steps

3.1 Disassemble the tail lights. (See Removal and Installation of Tail Lights)
3.2. Open the trunk cover, and use a cross head screwdriver to loosen off the four fixing clips on the rear bumper.

3.3. Use a cross head screwdriver to loosen off the three clips fixing the rear bumper bottom and the vehicle body.
Note: Raise the vehicle with a hoister.

3.4 Use an 8# torque wrench to loosen the screws connecting the wing sheet and the bumper.
Note: Two fixing screws on either side.

3.5 Pull off the connector of the rear license plate lights.

3.6 Disassemble the connector of the reverse radar and remove the rear bumper assembly.

3.7 Unplug the reverse radar.

3.8 Use a cross head screwdriver to loosen the clip seat of the reverse radar.

4. Installation Steps

The installation steps are reverse to those for removal.

Chapter V Removal and Installation of Headlights, Fog Lights & Tail Lights

1. Preparations

Tools: 10# open-ended wrench, cross head screwdriver.

2. Notes

2.1. Please wear necessary labour protection supplies to avoid any accidents.
2.2. Try to avoid scratching the painted surface of the bumper when removing it.
2.3. When removing the bumper in colder environment, operate gently to avoid cracking it.
2.4. When disassembling the headlights, violent operation may damage their clips on the bumper, so operate properly.
2.5 Pay attention not to scratch the headlight surface when disassembling and placing it.

3. Removal Steps of Headlights

3.1. First open the front hood.

3.2. Use a 10# open-ended wrench to loosen off the three fixing screws of the right headlights on the front compartment member.

3.3. Hold the headlight with both hands and apply a forward force to loosen off the right headlights.

3.4. Unplug the right headlights harness to take out the right headlights assembly.

3.5. Turn open the the high beam headlight holder shield by hand.

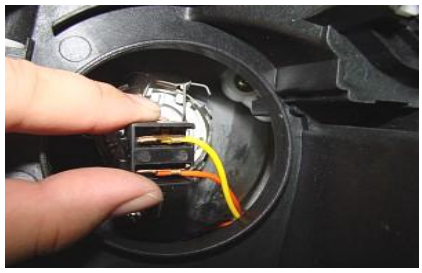
3.6. Press down the bulb fixing clip by hand and turn the clip over to take out the bulb.

3.7. Unplug the right-front position light harness to take out the bump.

3.8. Turn open the low beam light holder shield by hand.

3.9. Unplug the low beam light harness.

3.10. Press down the bulb fixing clip by hand and turn the clip over to take out the bulb.



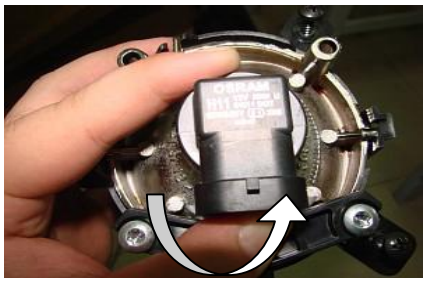
3.11. Turn the right-front turning light shield counterclockwise to disassemble the bulb.
(See the above steps for removal of the left headlight)

4. Removal of Front Fog Lights

4.1. Diassemble the bumper assembly. (Refer to removal of bumper)
4.2. Unplug the right-front fog lights harness connector.

4.3. Use a cross head screwdriver to loosen off the three screws that fix the front fog light, and then disassemble the right-front fog light assembly

4.4. Turn the right-front fog light holder and remove the bulb.
(See the above steps for removal of left-front fog lights)



5. Removal of Tail Lights

5.1. Open the rear door.
5.2. Use a cross head screwdriver to loosen off the screws fixing the left tail light.

5.3. Remove the left tail light, unplug the left tail light harness connector, and then disassemble the left tail light assembly.

5.4. Use a cross head screwdriver to loosen off the four screws that fix the tail light holder and open it.

5.5. Turn the bulb counterclockwise by hand and then the bulb can be removed.

6. Removal of License Plate Lights

6.1. Use a flat head screwdriver to pry off the license plate light.

6.2. Unplug the harness plug to disassemble the license plate light.

7. Installation & Adjustment of Headlights

7.1. Installation Steps for the Headlights

The installation steps of headlights are reverse to those for removal.

7.2. Functions of Headlights

7.2.1. Front view

See right figure:

1 High beam light
2 Position light
3 Low beam light
4 Turn light

7.2.2. Back view

1 High beam light holder
2 High beam adjusting nut
3 Low beam light holder
4 Low beam adjusting nut
5 High beam, low beam, position and turning light plugs
6 Turning light holder

8.3. Adjustment of Headlights

8.3.1 Pay attention to law and regulations and verify the following items before adjustment:

1). The tire air pressure should comply with the related standard;

2). Vehicle is unloaded (except for spare tire and equiping tools, and include driver's weight for sedan);

3). The vehicle should be parked on level and smooth road or field;

4). The matched mirror surface of the headlight should be fresh of dirt;

5). The power supply should work normally and the bulb should be properly installed.

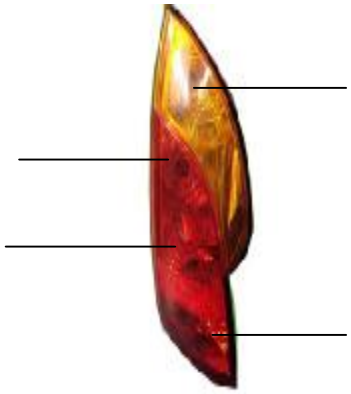
8.3.2. Insert a cross head screwdriver into related adjusting hole to adjust the light.

8. Installation & Adjustment of Front Fog Lights

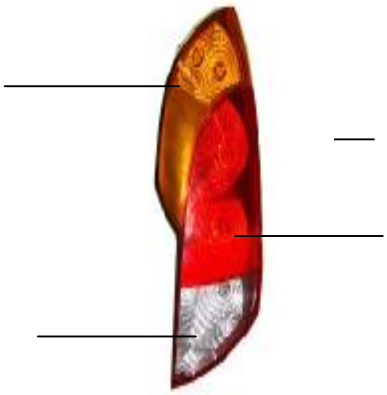
8.1. The installation of front light
The installation steps of front fog light are reverse to those for removal.
8.2. The adjustment of the front fog lights
The front fog lights can be adjusted by turning the device with your hand or a cross head screwdriver.

9. Installation of Tail Lights

9.1. Installation steps of the tail lights
The installation steps of tail lights are reverse to those for removal.
9.2. The functions of the tail lights
9.2.1. Front view
See right figure:
1). Left-rear turning light (21w)
2). Brake light (21w)
3). Position light (5-21w)
4). Rear Fog Light (21w)



See right figure:
1). Right-rear turning light (21w)
2). Brake light (21w)
3). Position light (5-21w)
4). Reverse indicator (21w)



Chapter VI Removal and Installtion of Vehicle Ceiling

1. Preparations

Tools: sleeve wrench, cross head screwdriver, flat head screwdriver

2. Notes

2.1. During the removal and installtion, make sure to apply proper force and no violent operation is allowed.

2.2. During removal and installation of the inner decoration parts, make sure to protect the decoration parts from being scratched.

3. Removal and Installation of Sun Visor

3.1. Removal Steps

3.1.1. Use a cross head screwdriver to loosen off the screws in the sun visor on the left of the driver's cab, and disassemble the sun visor.
As shown in the figure:
Torque: 3±1Nm

3.1.2. The removal steps for the right sun visor are reverse to those for removal of the left one.

3.2. Installation Steps

The installation steps are reverse to those for removal.

4. Removal and Installation of Vehicle-top Armrest

4.1. Removal Steps

4.1.1. Open the ceiling armrest screw cover over the co-driver's seat by hand, and then use a cross head screwdriver to loosen off the left and right fixing screws.
As shown in the figure:
Torque: 9±3Nm

4.1.2. Remove the ceiling armrest.

4.1.3. The removal of other ceiling armrests can follow the above steps.

4.2. Installation Steps

The installation steps are reverse to those for removal.

5. Removal and Installation of Front Ceiling light

5.1. Removal Steps

5.1.1. Align a flat head screwdriver with the groove along the ceiling light edge to pry it open, as shown in the figure:
Note: Do not scratch part surface.

5.1.2. Remove the three fixing screws of the the front ceiling light.
Torque: 1.5±0.5Nm

5.1.3. Unplug the harness and disassemble the front ceiling light assembly.

5.2. Installation Steps

The installation steps are reverse to those for removal.

6. Removal and Installation of Reverse Radar Display

6.1. Removal Steps

6.1.1. Use a cross head screwdriver to loosen off the screws of the reverse radar display.

6.1.2. Unplug the harness and remove the reverse radar display.

6.2. Installation Steps

The installation steps are reverse to those for removal.

7. Removal and Installation of A-pillar Shield

7.1. Removal Steps

7.1.1. Use a flat head screwdriver to pry open the weather strip of the left A-pillar shield, and then take out the left A-pillar shield by hand.

7.1.2. Take out the left A-pillar shield.

7.1.3. Follow the the removal steps of the right A-pillar shield for that of the left one.

7.2. Installation Steps

The installation steps are reverse to those for removal.

8. Removal and Installation of B-pillar Shield

8.1. Removal Steps

8.1.1. Disassemble the shield below the left B-pillar (See Removal and Installation of Seat belt).

8.1.2. Use a flat head screwdriver to pry open the B-pillar shield.
Note: protect the trim part surface from scratching.

8.1.3. Follow the removal steps of the left B-pillar shield for removal of the right B-pillar shield.

8.2. Installation Steps

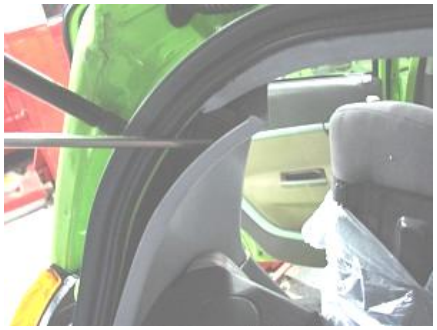
The installation steps are reverse to those for removal.

9. Removal and Installation of C-pillar Shield

9.1. Removal Steps

9.1.1. Use a sleeve wrench to loosen off the seat belt bolts (See Removal and Installation of Rear Seats & Seat belts).

9.1.2. Use a flat head screwdriver to pry open the C-pillar upper shield.



9.1.3. Remove the C-pillar upper shield.

9.1.4. Please follow the removal steps of left C-pillar upper shield for that of the right C-pillar upper shield.

9.2. Installation Steps

The installation steps are reverse to those for removal.

10. Removal and Installation of Vehicle Ceiling

10.1. Removal Steps

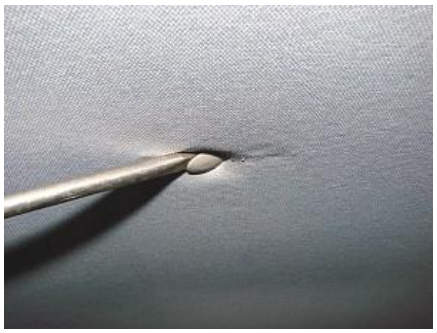
10.1.1. Disassembling the left/right front sun visors. (See Removal and Installation of Sun Visor)

10.1.2. Disaasembling the front ceiling light. (Refer to removal and installation of front ceiling light)

10.1.3. Disassembling all interior ceiling armrests. (See removal and installation of ceiling armrest)

10.1.4. Disassembling A/B/C-pillar shield. (See removal and installation of A/B/C-Pillar Shield)

10.1.5. Use a flat head screwdriver to loosen off the vehicle ceiling clip (4 in all).



10.1.6. Disassemble the four doors' weather strip by hand.

10.1.7. Open the trunk and disassemble the vehicle ceiling.

10.2. Installation Steps

The installation steps are reverse to those for removal.

Chapter VII Removal and Installation of Instrument Panel & Instrument Panel Crossbeam

I. Removal of Instrument Panel

Tools: 8 #sleeve, extension bar, 飞扳[MS1], cross head screwdriver, flat head screwdriver, etc.

1. Removal Steps

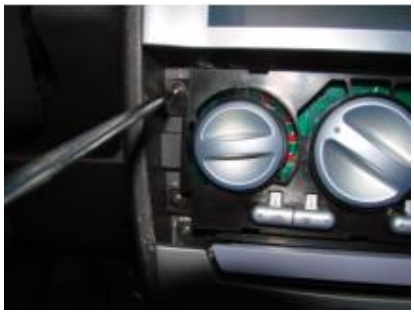
1.1. Open the storage box over the console, and use a cross head screwdriver to loosen off the two screws. Then use a flat head screwdriver to pry open the storage box. See the right figure:

1.2. Use a cross head screwdriver to loosen off the two screws than connect the emergency switch with the Instrument Panel, as shown in the figure:

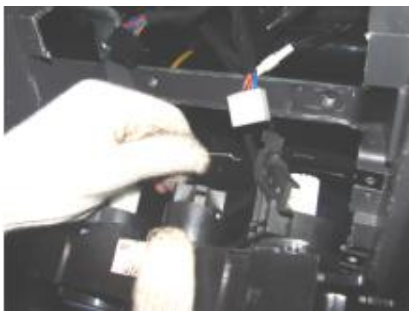
1.3. Pull out the top part by hand, and then use a flat head screwdriver to pry open the lower part. Unplug the harness when removing it, as shown in the figure:

1.4. Use a flat head screwdriver to pry open the control panel of the airconditioner switch and take it out.

1.5. Use a cross head screwdriver to loosen off the four screws that connect the airconditioner switch and the Instrument Panel.



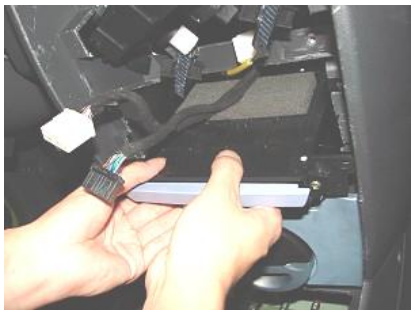
1.6. When taking the airconditioner switch, unplug the two harness plugs behind it and disassemble the two cables behind the switch.



1.7. Use a 8# sleeve wrench to loosen off the four fixing bolts that connect the audio system with the Instrument Panel.

1.8. When taking out the audio system, unplug the antenna and harness.

1.9. Use a cross head screwdriver to loosen off the two screws that connect the cup-holder and the Instrument Panel, and then take out the cup-holder.



1.10. Disassemble the auxiliary Instrument Panel (See Chapter I Removal, Installation & Adjustment of of the Brake System).

1.11. Use a cross head screwdriver to pry open the decoration sheet on the ash tray and take it out.

1.12. Use a cross head screwdriver to loosen off the four screws that connect the cigarette lighter with the Instrument Panel, and unplug the harness when removing the lighter.

1.13. Use a cross head screwdriver to loosen off the three screws that connects the ashtray with the Instrument Panel and take out the ashtray.

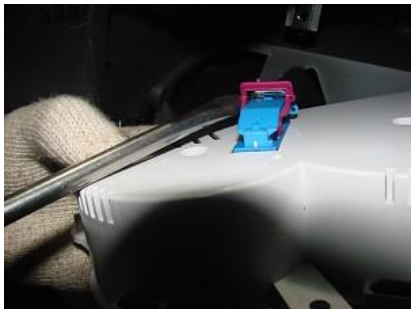
Note: When disassembling the console, the operations should be carried out from top to bottom, and you should disassemble the air-conditioner switch before disassembling the audio system.

1.14. Disassemble the steering wheel, combination switches and ignition switch.

1.15. Use a cross head screwdriver to loosen off the two screws on the instrument panel shield and the Instrument Panel, and then pull it out with both hands.

1.16. Use a cross head screwdriver to loosen off the four screws on the instrument panel and the Instrument Panel.

1.17. Use a flat head screwdriver to pry up the red clip and the instrument panel harness plug can be taken out before the instrument panel is taken out.



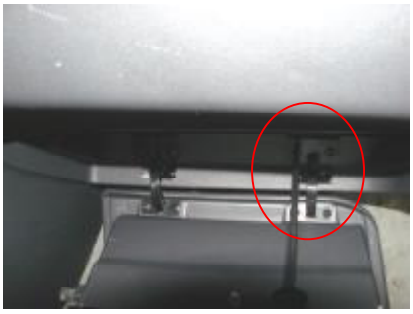
1.18. Push out the two harness plugs from behind the fog light switch.

1.19. Disassemble the left-front and the right-front door seal strip.

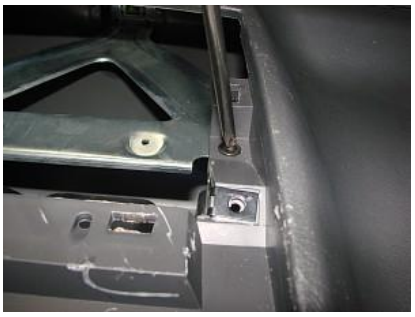
1.20. Disassemble the decorative shields of the left and righte A-pillars (See Removal of Vehicle Ceiling for details).

1.21. Open the storage box to the lower right of the Instrument Panel, use a cross head screwdriver to loosen off the four screws on the storage box and disassemble the storage box.

1.22. Disassemble the front hood cord switch (See Removal of Front Hood & Trunk).



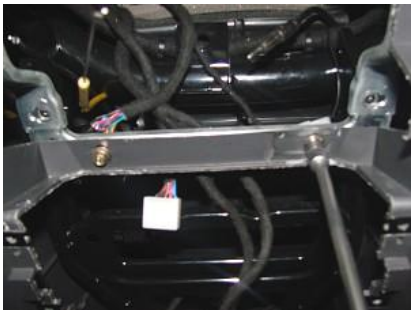
1.23. Use a cross head screwdriver to loosen off the two screws on the console.

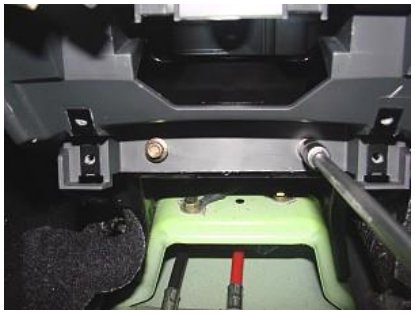


1.24. Pull off the central switch box shield to the left Instrument Panel.

1.25. Use a 8# wrench to disassemble the bolts to the left and right of the Instrument Panel (with 3 bolts for the top/middle/bottom part respectively, i.e. 9 in total).

1.26. Use a 8# sleeve wrench to loosen off the four bolts that connect the console and the instrument beam and another bolt behind the instrument panel.





1.27. Unplug the harness plugs of the left and right loudspeakers.

1.28. Take out the Instrument Panel.

Notes: 1. Disconnect the battery negative before disassembling the electrical equipment.
2. Don't wait until all the Instrument Panel bolts are disassembled before you disassemble the ones on the other side, or the Instrument Panel are likely to get deformed.

2. Installation Steps

2.1. The installation steps are reverse to those for removal.

2.2. Notes
①. Double-wind channels should agree with the air-conditioner outlet connector and be installed properly without any air leak, and the Instrument Panel air channel should not conflict with the Instrument Panel crossbeam, the evaporator and other parts, or the Instrument Panel and its accessories will not be installed properly.
②. The Instrument Panel should not interfer with the front windscreen or affect its installation and an even clearance should exist between the Instrument Panel and the windscreen.
③. The clearances between the Instrument Panel and either sides of the vehicle body should be consistant and meet the requirements for assembling the door weather strips.

3. Methods for Clearing Instrument Maintenance Indicator

1. Clearing with diagnosis equipment:
①. Using the X431 diagnosis equipment: Select the OBD-Ⅱ diagnosis connector and connect it with the diagnosis interface below the instrument panel; turn on the ignition switch and start the diagnosis equipment; choose the latest edition and select the instrument panel system; select "ATECH Instrument System", and then "Action Testing"; select "Maintenance and service requirements", and then click “confirm” to clear the instrument maintenance indicator, and then exit the diagnosis equipment;
②. Using K81/K61 diagnosis equipment: Select the MITSUBISHI diagnosis connector and connect it with the diagnosis interface below the instrument panel; turn on the ignition switch and start the diagnosis equipment; choose the latest edition and select the instrument panel system; select "Instrument System (ATECH)", and then "Action Testing"; select "To clear maintenance requirement indicator", and then press “enter” to clear the instrument maintenance indicator, and then exit the diagnosis equipment;
2. Clearing by the adjusting knob as follows:
①. Insert the key into the ignition switch and get it to the position “Ⅰ”;
②. Press the mode adjusting knob by hand and let it stay there when you turn the key to “Ⅱ” position;
③. Push down the mode adjusting knob and keep it there for about 20 seconds before you release the knob, and then the maintenance indicator will be cleared.

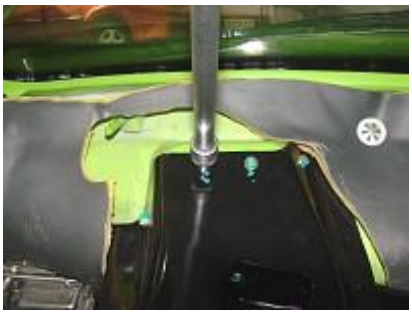
II. Removal of Instrument Panel crossbeam

1. Removal Steps

1.1. Disassemble the Instrument Panel assembly (See Removal of Instrument Panel)
1.2. Use a 13# sleeve, combined wrench to loosen off the two nuts and four bolts that connect the Instrument Panel crossbeam with the left/right A-pillars.

1.3. Use a 13# wrench to loosen off the bolts at the place as shown in the figure.

1.4. Use a 10# wrench to loosen off the four bolts at the places as shown in the figure.



1.5. Use a 10# wrench to loosen off the four bolts at the places as shown in the figure.

1.6. Use a 10# wrench to disassemble the two bolts of the ground wire earth at the places as shown in the figure.

1.7. Loosen off the single bolt and four nuts on the side pillars (See Chassis Maintenance Manual: side pillars), and then relase the side pillar.

1.8. Disassemble all harness plugs that are connected with the Instrument Panel crossbeam. For example, the harness plug of the brake light switch.

1.9. Take out the Instrument Panel crossbeam.

2. Installation Steps

The installation steps are reverse to those for removal.

Chapter VIII Air Conditioning System

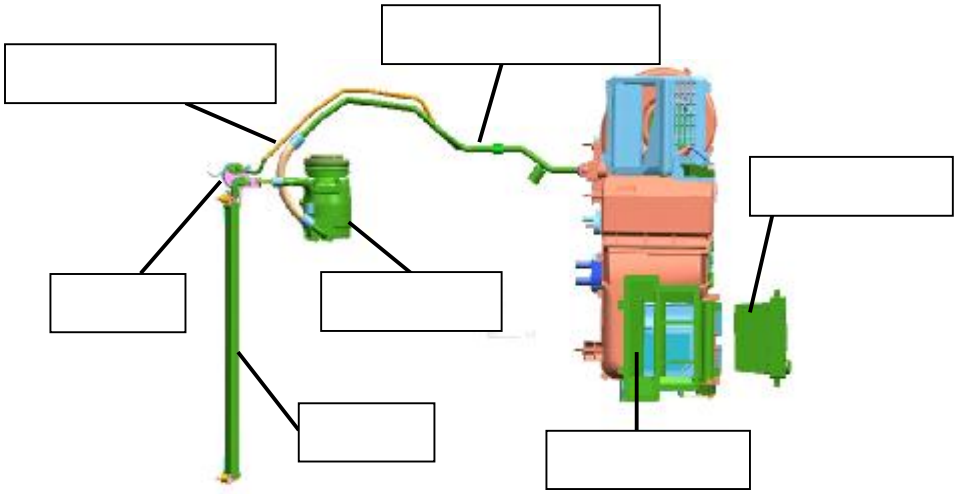
I. System Constitution

Air adjustment and distributing system: HVAC air mixing and distributor part, inside/outside circulation air inlet, air outlet, outside circulation air filter.

Control system: control panel assembly, micro motor, blower, speed regulating mode, high/low voltage switch, AC thermostat.

Heating system: heating water tank, hot water pipe, and engine cooling water system.

Cooling system: compressor, condenser, reservoir dryer, expansion valve, evaporator and pipe.



II. Removal of Evaporator Assembly

1. Preparations

Tools: cross head screwdriver, vehiclep pliers, socket spanner
Auxiliary material: refrigerant, antifreeze, sponge rubber strip

2. Removal Steps

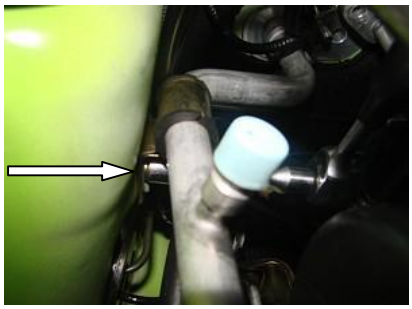
2.1. Use coolant recycling machine to recycle the coolant.
Note:

（1） Don’t deal with the coolant in any closed place or near flame.

（2） Do not splash the refrigerant into eyes and skin.

2.2. Disassemble the Instrument Panel assembly and the front crossbeam, and unplug the related electrical equipment connector. (See Removal and Installation of Instrument Panel)

2.3. Use a sleeve wrench to loosen off the fixing bolts of the high/low pressure pipes.



2.4. Loosen the fastening nuts of the high/low pressure pipes, and then pull them out.

2.5. Loosen off the three nuts fixed on the plate work.

2.6. Use pliers to remove the inlet/outlet water pipes of the evaporator and pull out the pipes.
Note: Coolant will flow out from the water pipe, pay attention to recycle the coolant.

2.7. Loosen off the 8 fixing nuts that fix the evaporator assembly on the plate work from the front compartment (See the following figures for detailed positions).

2.8. Take the evaporator assembly from the driver's cab..

3. Installation of Evaporator Assembly

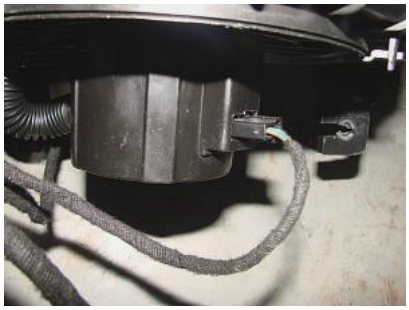
The installation steps are reverse to those for removal.

4. Removal and Installation of Evaporator Interior

Preparation of Tools: cross head screwdriver, sleeve wrench.

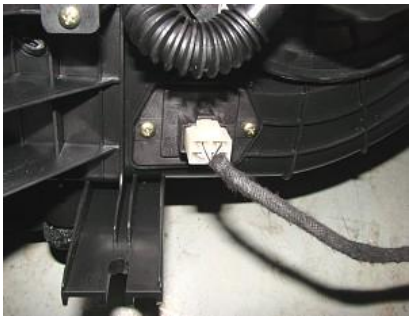
1. Replacement of Blower

1.1. Removal Steps
1.1.1. Disassemble the blower motor, relay and motor speed regulation module plug.

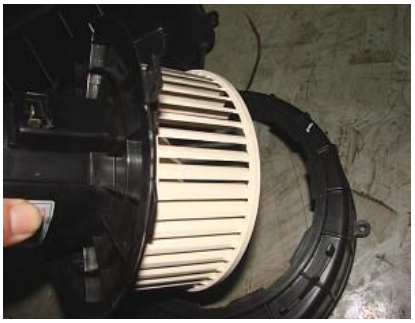


1.1.2. Remove the blower cooling jacket.

1.1.3. Push down the clip and drag out the blower clockwise.

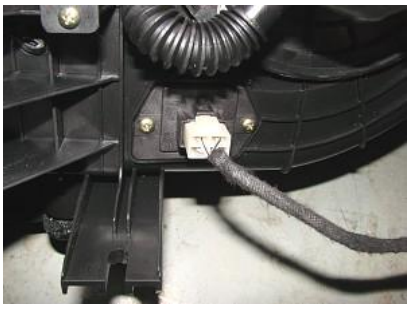


1.2. Installation Steps
The installation steps are reverse to those for removal.



2. Removal and Installation of Blower Speed Regulation Module

2.1. Removal Steps
2.1.1. Pull out the speed regulation module plug.



2.1.2. Use a cross head screwdriver to loosen off the 2 fixing screws on Speed Regulation Module.

2.1.3. Pull out the speed regulation module.

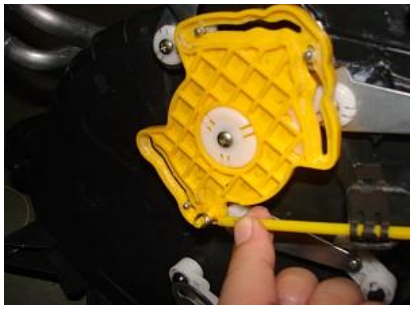
2.2. Installation Steps
The installation steps are reverse to those for removal.

3. Removal and Installation of Heater Exchanger

3.1. Removal Steps
3.1.1. Disassemble the evaporator assembly. (See Removal of Evaporator Assembly)
3.1.2. Disassemble the air-conditioner harness. (See Removal of Air-conditioner Harness)
3.1.3. Loosen off the two fixing screws and remove the heater exchanger shield.

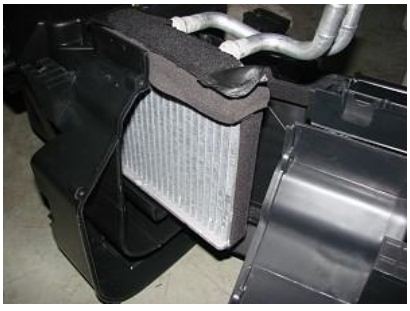
3.1.4. Unplug the plug of the evaporator thermostat.

3.1.5. Disassemble the mode throttle hitch bar.



3.1.6. Remove the temperature control throttle bar.

3.1.7. Loosen off the 8 screws on the heater shiled, and disassemble the evaporator shield.
Notes: The sponge weather strips around the shield are for single use only.



3.1.8. Use a flat head screwdriver to pry off the clips that fix the air conditioner cover plate assembly.

3.1.9. Remove the air conditioner cover plate assembly.

3.1.10. Tear open the sponge around the inlet/outlet water pipes and remove the fixing clips.

3.1.11. Remove the heater exchanger.

3.2. Installation Steps

The installation steps are reverse to those for removal.

After the installation, the system should be evacuated, proper pressure should be maintained and anti-freeze agent should be filled to check for any leakage. Check if the radiator is blocked and pressure air can be used to get it through if it is.

4. Removal and Installation of Mode Throttle Related Mechanism

4.1. Removal of Steps

4.1.1. Remove the mode throttle hitch bar, use a cross head screwdriver to lossen off the fixing screws on the control panel to disassemble.

4.1.2. Loosen off the three screws and washers behind the control panel that control defroster, blowing head, blowing foot and control arm.

4.2. Installation Steps
The installation steps are reverse to those for removal.

5. Removal and Installation of Blend Throttle Related Mechanism

5.1. Removal Steps
5.1.1. Remove the blend throttle bar, and use a cross head screwdriver to loosen off the screws on the control panel.

5.1.2. Use a flat head screwdriver to pry off the control arm.

5.1.3. Remove the blend throttle.

5.2. Installation Steps
The installation steps are reverse to those for removal.

6. Removal and Installation of Int./Ext. Throttle Motor & Related Mechanism

6.1. Removal Steps
6.1.1. Unplug the motor plug.

6.1.2. Loosen off the 4 fixing screws to remove the shield.

6.1.3 Loosen 3 screws of inside/outside circulation ventilator motor, and disassemble the motor.

6.1.4. Use a flat head screwdriver to pry off the plastic parts that fix the inside/outside circulation ventilator.

6.1.5 Remove the inside/outside circulation ventilator.
6.2. Installation Steps
The installation steps are reverse to those for removal.

7. Removal and Installation of Evaporator

7.1. Removal Steps
7.1.1. Disassemble the evaporator assembly (See removal of Eevaporator assembly)

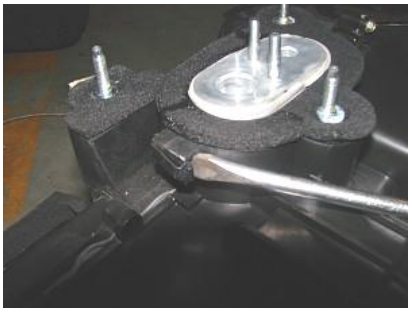
7.1.2. Remove the air-conditioner harness (See removal of air-conditioner harness)

7.1.3 Disassemble evaporator water thermostat (Refer to removal of evaporator water thermostat)

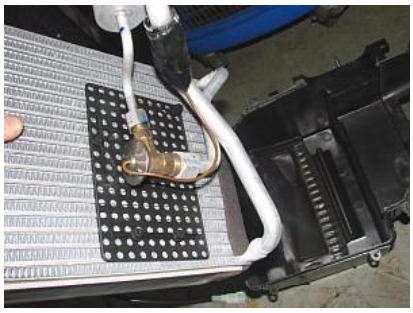
7.1.4 Disassemble mode ventilator connection rod (Refer to removal of mode ventilator motor)

7.1.5. Remove the temperature control throttle bar

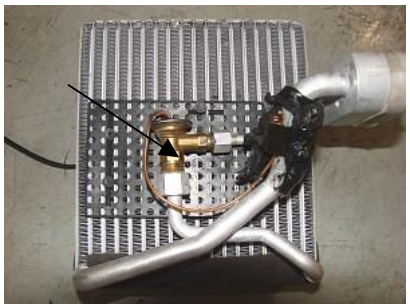
7.1.6. Loosen off the 9 screws on the evaporator shield, and use a flat head screwdriver to pry off the two clips to disassemble the evaporator shield.
Note: The sponge seal around housing is for single use only



7.1.7 Remove the evaporator assembly.



7.1.8. Use a wrench to disassemble the expansion valve.
7.2. Installation of the Evaporator Assembly
The installation steps are reverse to those for removal.
After the installation, the system should be evacuated, proper pressure should be maintained and anti-freeze agent should be filled to check for any leakage. Check if the radiator is blocked and pressure air can be used to get it through if it is.



III. Trouble Shooting

Types of pressure deviation	Possible causes	Method for troubleshooting
1. The pressure at the high pressure side remains unchanged or just slightly rises (compared with the value when the engine stalls); the pressure at the low pressure side is within or under the range as shown; the air conditioner is under refrigeration. 2. The pressure at the high pressure side is normal; the pressure at the low pressure side is within the range as shown; the air conditioner is under refrigeration.	Lack of refrigerant or the expansion valve fails	Evacuate the refrigerant ●If the volume of the refrigerant is normal 1. Replace the expansion valve 2. Refill the refrigerant to the system 3. Test the pressure again ●If the volume of the refrigerant is short 1. Check if there is leaking, if there is fix it 2. Refill the refrigerant to the system 3. Test the pressure again
The pressure at the high pressure side is higher than the specified value; the pressure at the low pressure side falls rapidly to within or under the range as shown; the air conditioner is under refrigeration.	The blockage or throttling occur somewhere in the refrigerant pipelines The expansion valve fails	Touch the pipelines to feel the temperature change ●If there exists temperature differences on several parts of a certain component 1. Dredge the pipe with compressed air and nitrogen and replace the expansion valve. 2. Replace the blocked parts. ●If no trouble found: 1. Dredge the pipelines with compressed air and nitrogen 2. Test the pressure again.
Initially, the pressures at the high and low pressure sides are normal, but after a period of time, the pressure at the high pressure side is higher than the specified value and the pressure at the low pressure side is within or under the range as shown; the air conditioner is under refrigeration.	The expansion valve fails There exists vapor in the refrigerant pipelines	Check for dirt or rust in the expansion valve and replace it when necessary ●Dredge the pipelines with compressed air and nitrogen

The pressure at the high pressure side is higher than the specified value or is too high; the pressure at the low pressure side is too high; the air conditioner is under refrigeration; the compressor makes exceptional sounds (especially when just starts the engine).	The refrigerant in the refrigerant pipelines is excessive The expansion valve fails or the compressor is disabled	Evacuate the refrigerant ●If the volume of the refrigerant is normal 1. Replace the expansion valve 2. Refill the refrigerant to the system 3. Test the pressure again ●If the refrigerant is obviously excessive 1. Refill the refrigerant to the system 2. Test the pressure again. Note: If the system is still off normal after retesting the pressure, install the expansion valve, have it replaced and dredge the pipelines with compressed air and nitrogen, and then further replace the compressor and the fluid reservoir and drying chamber.
When turning off the engine, the pressure at the high pressure side slightly rises while the pressure at the low pressure side slightly falls; the air conditioner is under refrigeration.	The compressor is disabled	Dredge the pipelines with compressed air and nitrogen Replace the compressor and the fluid reservoir and drying chamber
High pressure side is correct, low pressure side is too low, AC refrigerating correct, sometimes the evaporator has ice (even the refrigerant quantity is correct)	The expansion valve fails or the compressor is disabled	Replace the expansion valve Refill the refrigerant to the system Test the pressure again Note: If the system is still off normal after retesting the pressure, install the expansion valve, have it replaced and dredge the pipelines with compressed air and nitrogen, and then further replace the compressor and the fluid reservoir and drying chamber.
1. High/low pressure sides are correct, AC refrigerating deficiency. 2. High/low pressure sides are correct, compressor is abnormal (especially when the engine is started), AC refrigerating good	The transmission oil in the air conditioner pipelines is excessive	Evacuate the refrigerant ●Dredge the pipelines with compressed air and nitrogen Note: Adjust the volume of the lubricant when replacing such component of the air conditioner system as the compressor
The reservoir can not be used	• Puncture • The sealed part is damaged • Thread of fasten part is damaged, outside air entering to system	Replace

CHAPTER IX Body Dimension

I. Basic Instructions on BIW Maintenance

Vehicle body maintenance should be carried out by professionals according to the requirements of the manufacturer, and only in this way will the promises of "rust free" and "paint defect free" be effective.

1. Only adopt the materials specified by the manufacturer;
2. When welding the outside metal of the vehicle body, make sure protective coating is applied to the inner side;
3. When spot-welding, make sure zinc coating is used;
4. Before air-tight sealing the welded parts, apply a layer of filling coating to the inner side and outer side;
5. Before protecting the chassis with paint, apply protective coating to protect the chassis from rock bumping;
6. When the coating is sprayed, all opening parts at this position should be secured with fasteners;

In some cases, the vehicle must be placed on a hoister platform, for removal of spare parts may affect the distribution of various parts in the vehicle body.

Before spot-welding, make sure the battery connector is unplugged, and check if the ventilation is good enough before welding.

In maintaining the vehicle body in a certain area, take care to protect other vehicles in this area.

Be particularly careful when spraying sand or welding near the oil tank or fuel system, and disassemble them if the safety can not be assured.

When maintaining or spray-painting the vehicle body, take all possible measures of preventing accidents.

When welding galvanized steel sheets, the spot-welding current should be raised by 30%, and the electrodes should be pointed, and the clamping force of the electrodes should be increaded; and when doing gas shielded welding, the welding current should be further intensified.

Do not weld the air-conditioning parts or try to weld the parts on the vehicle whose temperature are easily raised. When spray-painting the vehicle frame, the temperature either in the drying oven or the pre-heating oven should not go beyond 80˚C.

Take the following measures during welding operation to prevent shaking the electronically welded equipment:

1. Connect the grouding of the electronic welding equipment directly to the welded parts. And check to make sure no other parts or insulative parts exists between the ground wiring connector and the spot-welded parts;
2. First disassemble the ECU, and prevent the electronic device or circuit from contacting the ground wiring connector or welding wire.

Corrections:

The vehicle body and the chassis are manufactured off the production-line by low-temperature tempering and cold die casting. Therefore, when the metal parts are damage in any accident, the same processes must be used to restore them, and no heating is allowed. If they are damaged very seriously and can not be restored, the damaged parts must be removed after the connecting surface is corrected.

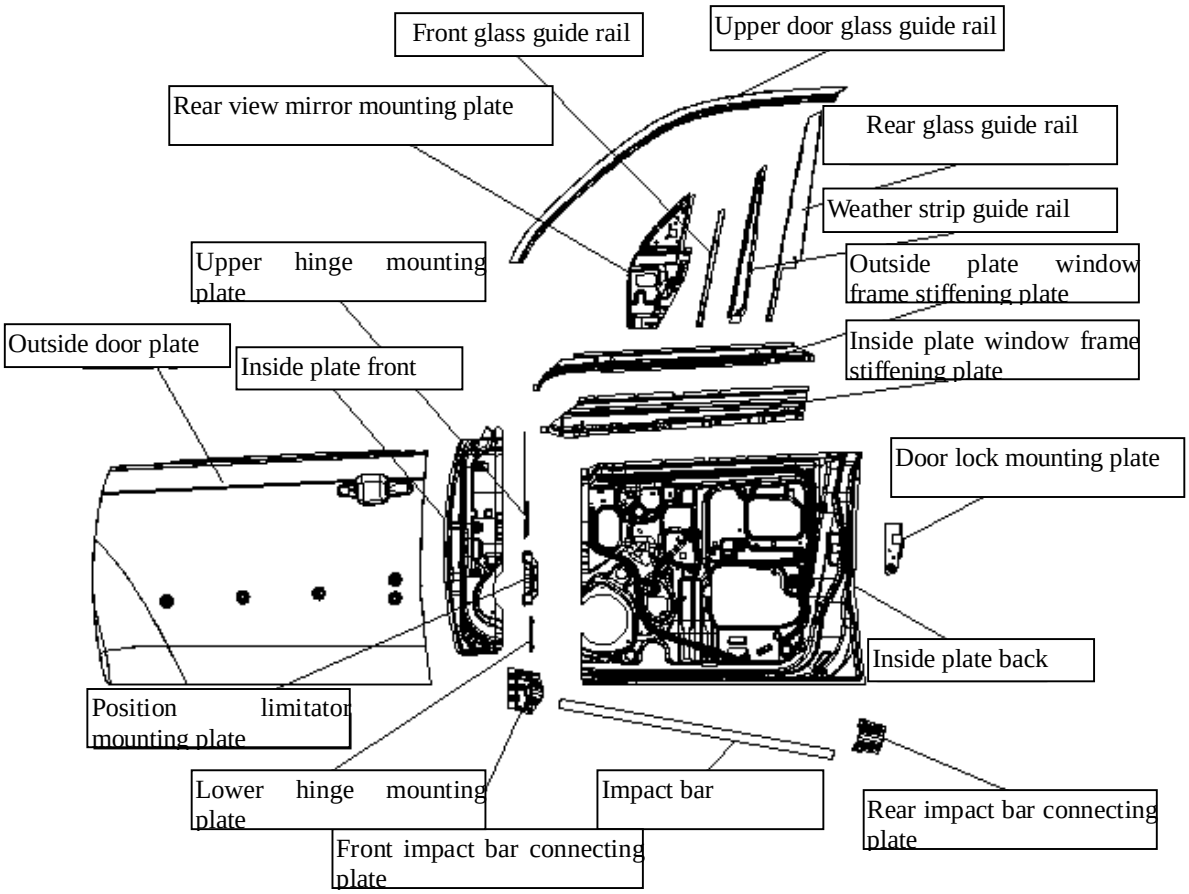
The car bodies are made up of various members, pressing panels and other parts, of which the doors are the most complexly processed parts of the vehicle body. They involve processes like part stamping and welding, assembly of spare parts and assemblies, for which the dimensional fits and technical requirements are quite

strict, so the car doors are difficult to maintain and the quality requirements are fairly high, and only the service personnel understand the structure of the car doors thoroughly and are qualified for the maintaining operations.

1. Vehicle Door Structure

Generally speaking, the vehicle doors consist of outside plates, inside plates, window frames, glass guide rails, hinges, locks and window accessories and so on. The inside door plates are equiped with accessories including glass lifter, locks and so on. To secure the assembly, some parts of the inside door plates need to be fortrified. To increase safety level, the inner parts of the outside plates are usually equipped with impact bars. The outside plates and inside plates are connected by flanging, adhesion, seam welding and so on. Depending on different bearing capabilities, the outside plates should be light and the inside plates should have higher rigidity and be able to stand stronger impact.

The BIW vehicle door assemblies have relatively fewer components, and usually consist of inside plates, outside plates, glass guide rails, window frame reinforcing plates, lock mounting plates, hinges reinforcing plates, impact bar assemblies and so on; The figure below is a typical structure drawing of a vehicle door.


Front glass guide rail
Upper door glass guide rail
Rear view mirror mounting plate
Rear glass guide rail
Weather strip guide rail
Upper hinge mounting plate
Outside plate window frame stiffening plate
Outside door plate
Inside plate front
Inside plate window frame stiffening plate
Door lock mounting plate
Inside plate back
Position limitator mounting plate
Lower hinge mounting plate
Impact bar
Rear impact bar connecting plate
Front impact bar connecting plate

2. Door panel Maintenance Process

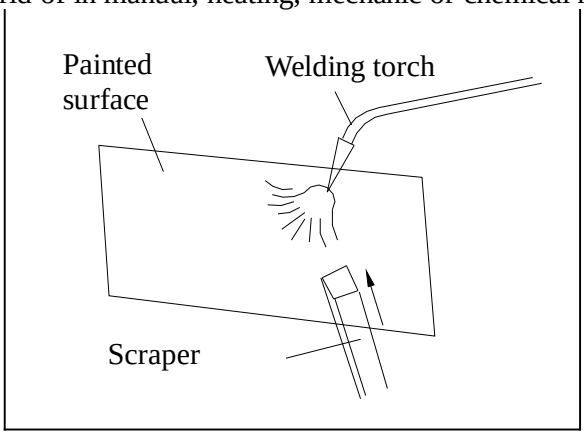
Generally speaking, the basic maintenance methods for car doors and hoods are the same as those for ordinary plate work, and the following steps apply to both of them:

（1） Primary tests. The positions of the door panels as related to other assemblies of the vehicle body as well as the dimensions of their tolerance clearances should be tested;

（2） Clean the vehicle doors. Use fresh water or detergent to clean the dirt and greasy spots on the door panels, and let them thoroughly dry for tests.

（3） Maintenance appraisal. Appraise the scope and degree of damage to the door panels by testing and decide the maintenance methods.

（4） Clear the old paint. Before cleaning or maintenance, get rid of the old paint according to the actual situation, especially when there exists obvious rust, cracks or dents; The paint can be got rid of in manual, heating, mechanic or chemical metchod(s).



（5） Tests after the removal, including the measurements of the geometric dimensions between various plate work pieces, tests of specific damage spots of various plate work pieces, recognition of damage types, analyses of damage causes and choices of maintenance schemes.

3. Main Contents of Door Panel Maintenance

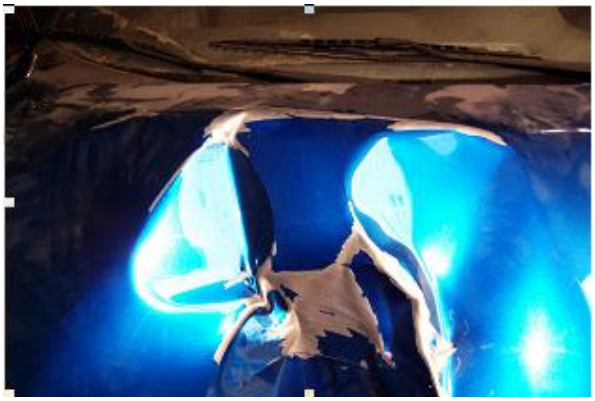
Generally speaking, the causes of door panel damages are related to the following 4 aspects: structure design defects, manufacturing defects, chemical erosion, and physical damage. And the most common damage causes can be classified as the following types:

1. Abrasion: The surfaces of plate work pieces may contact each other and relative movements will take place and cause surface friction, which will lead to abrasion. For example, the long time friction between the hinge hole and the shaft of the vehicle door hinge will increase their tolerance clearance and cause to vehicle doors to drop.

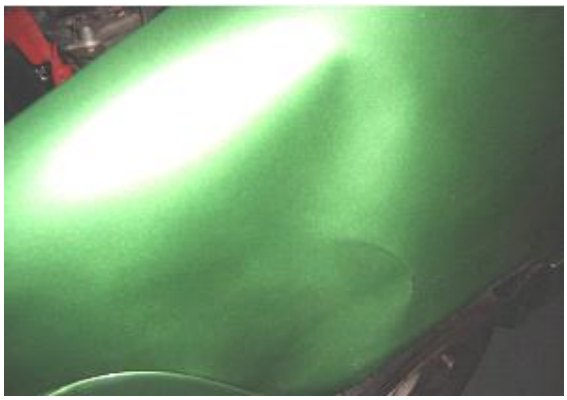
2. Erosion: This is generally due to the oxidation caused by the mud deposit and dirt; or the rust caused by lack of anti-erosion processing after welding; or erosion caused by chemicals. This type of damage usually occurs between the plate work pieces, in overlapped parts of spot-welded pieces, and at other similar places.

3. Cracks or breaks: The metal plates may develop fatigue under repeated inner/outer stress where the stress concentrates and the structure is the weakest, causing cracks and even breaks.

4. Dents or wrinkles: Dents develop because the door panel is subjected to bumping or pressing, leading to elastic or plastic deformations.



5. Bends or twists: They are mainly caused by too much load the door panel receives in use or the plastic deformation due to bumps.



4. Basic Methods for Door Panel Maintenance

The basic maintenance methods for the above door panel damage types include dent reconditioning, flame correction, welding, repairing and mending, wrinkle spreading and so on.

4.1. Reconditioning of Dents

For convex-concave damages in the outside door panels, if they are indirectly caused by structural pieces or reinforcers, the structural pieces should be corrected first, and then the outside panel breaks or dents are to be corrected. If the backs of the metal panels are accessible, hand hammers and underlay irons or spoon-shaped irons, tommy bars, flat punches and so on can be used for primary repairs. For enclosed metal panels or parts that are difficult to access from the backs, other tools can be used for repairing, such as slide hammers and pointed hammers.

Here are some common ways of dent reconditioning:

(1) Repair the dents with underlay irons and hand hammers: the commonest practice is to beat the damaged metal panels with underlay irons and hand hammers. Both sides of the metal panel to be repaired must be accessible to the hand-held underlay iron and there are two ways of using the underlay iron as the supporting piece for the hand hammer:

① Beat with a hammer from above the underlay rion. This approach is suitable for correcting smaller and shallower dent or breaks.

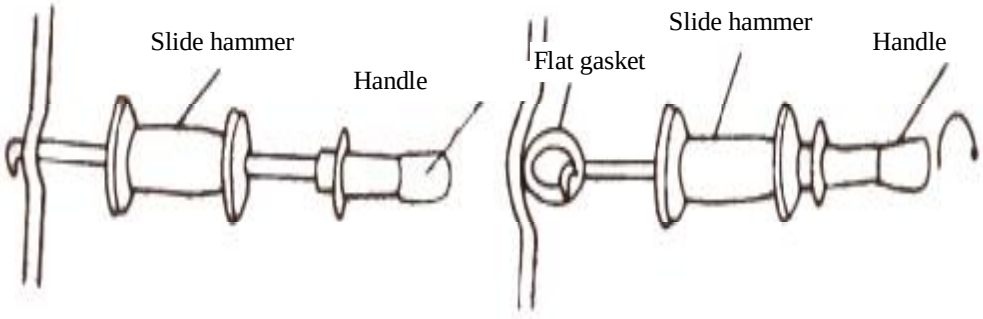
When beating with a hammer from above the underlay rion, the hand-held underlay iron should be placed against the back of the metal panels, and then beat the convex part. The beating of hand hammer can make the metal panel contract and finally smooth the metal panel.

② Beat with a hand hammer from other parts than from directly above the underlay iron. The underlay iron is placed against the lowest part of the dent, and then the higher parts near the dent are beaten with a hand hammer.

Generally, when trying to repair the dent with a hand hammer and an underlay iron, the convex side is beaten with the hand hammer and the concave side is pressed against the underlay iron. First do brief correction by beating the damaged part with a wooden hammer, and then do finer repairing with an iron hammer. For a larger area of dent, the underlay iron should be placed against the place where the dent is shallower, and the hand hammer should beat the higher parts. Besides, the wooden hammer and the iron one should be used alternatively according to the actual situation.

(2) Repair the dent with a shaping spoon or tommy bar. Shaping spoons and tommy bars are commonly used tools for door panel maintenance, and they are customized according the characteristics of the vehicle body. They can reach the limited space between door panels to push up the dent. This method is suitable for the narrow room between the door panels where it is inaccessible for the underlay iron or the hammer, and the shaping spoon can act as a underlay iron to distribute the impact of the hammer over a larger area.

(3) Restore the dent with a dent smoother. The dent smoother is applied to the inner side of the metal panel and it is used for the dents that are hardly accessible to other tools and it is usually operated in the following two ways:



Puncturing: Drill a small hole in the dent with a hand power drill, and then insert a pull-rod with threaded head or hook-shaped head into the hole. Slide the slide hammer on the metal pull-rod and impact the handle repeatedly so as to pull up the dent gradually. Make more than one holes when necessary, and fill the hole(s) by soldering and polish the spot(s) when the dent(s) is/are smoothed.

Electrode welding: Weld a peg or a flat gasket onto the dent with a special spot-welder, and then use a dent smoother to pull at the peg or flat gasket till the dent is smoothed. More than one peg or flat gaskets can be welded when necessary so that the whole dented area can be dragged out. Finally, break the peg or flat gasket, and polish the welded scar with a sand mill. This method can avoid drilling the metal panels and prevent potential erosion, so it is widely used.

4.2. Restoration of Stretched Parts

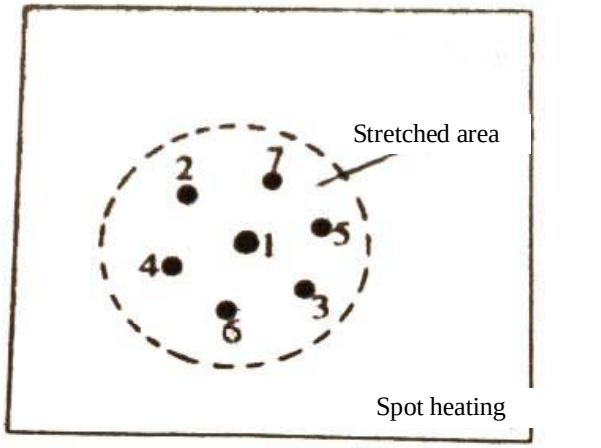
When the metal panel is impacted, the dented area would be stretched. At times even proper operations can not restore it, the heating-contracting method is sometimes used to achieve the desired repairing effect.

(2) Heated position and flame intensity: The effect of flame correction depends on the heated position and the flame intensity. Different heated spots bring about different effects, and the heated position should be where the material is deformed the most and the metal panel is stretch the most, or the furthest part outward that is bent and deformed. Different flame intensities also lead to different correcting effects. The intenser the flame is, the faster the metal panel is heated and the more concentrated the heat is, and then the stronger the contracting capability is. The low-carbon steel panel, for example, should be heated till it gets cherry red (600℃ - 800℃).

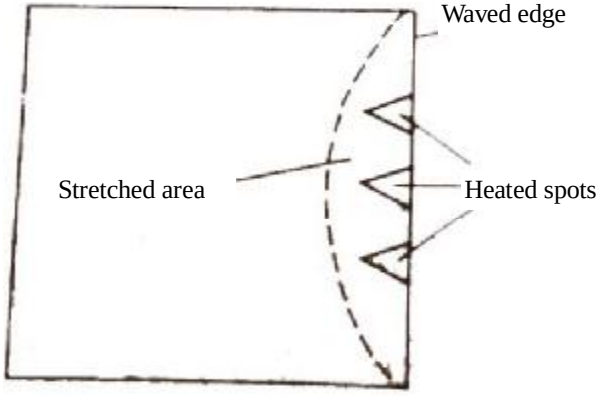
(2) Heating ways normally adopted for flame correction in the vehicle body maintenance are:

① Spot heating: The heated area is a round spot of a certain diameter, which is usually 15 - 30mm. One or more spots can be heated according to the actual deformity situation. When more than one spot is heated, the spots are arranged in a plum pattern. And this way is often used for contracting the convex area in the middle of the panel.

② Triangle heating: The heated area resembles a triangle, and this way is often used for correcting strip-shaped materials and deformed panel edges.



Spot heating



Triangle heating

（3）Cooling-contracting way: When the flame is taken away, proper cooling ways should be chosen according to the stretched degrees of the metal panels. Different cooling ways bring about different contracting effects.

① Natural cooling-contracting, or cooling in the air naturally, which is suitable for smaller areas of deformities.

② Water cooling, or covering the heated area with wet cotton cloth to make it cool suddenly. The contraction of metal plate cooled in this way is larger than that of the naturally cooled one, but it may make the steel panel fragile.

③ Natural cooling and hammering, usually operated with a hand hammer and a underlay iron. During the operation, beat around the heated area quickly to increase the compressing stress and the contraction till that area is smoothed. The wooden hammer is preferred and do not use too strong a force, or the metal panel may get re-stretched.

4.3. Restoration of Cutting & Patching

When any part of the metal door panel is eroded or damaged beyond repair, it should be removed and replaced with a new piece by welding. The repairing methods include patching repair and cutting.

Steps for cutting repair are as follows:

（1） Check the damaged part and determine the repairing area.

（2） Make a paper model according to the determined area.

（3） Draw lines on the metal plates and cut material according to the paper model, and leave proper processing allowance.

（4） Select proper processing and shaping methods so that the patch matches well with the

part to be removed.

（5） Apply the patch to the intended position and press it tightly, draw a line along the edge of the part to be removed and cut it out, using methods like gas cutting or excising according to the actual situation, and then align the patch with the excised area.

（6） Weld the seam by gas welding or carbon oxide protection welding. Spot-weld it at a pace of 30-50mm to fix it and then weld it again in a certain order after beating it smooth. For seams requiring welding of higher strength, doulble-sided welding is prefered.

（7） Smooth the welded seam by beating it with flat hammer, release the welding pressures, and then shape it and polish the seam with a grinding machine.

4.4. Restoration of Wrinkled Parts

Depending on the damage extent of the plate work pieces, the wrinkles are divided into “live wrinkles” and “dead wrinkles”. The “live wrinkles” are slight ones and can be directly removed by beating the convex part with a hammer. The “dead wrinkles” refere to seriously damaged parts. Since the wrinkles are folded and pressed against each other, so if you hammer the most convex part, the wrinkles would get even more seriously and harder to release, hence the name “dead wrinkles”. The principle of correcting the wrinkles is to spread “dead wrinkles” first so that they become “live wrinkles”, and then “live wrinkles” are converted into convex-concave shape, and finally restore the damaged parts just as you deal with convex-concave damages. The repairing steps are as follows:

（1） First use support-draw method to apply a correcting force in the direction opposite to that of the impact at the wrinkled part of the plate work, and then spread and ease the wrinkles.

（2） Remove the wrinkled plate work and lay it on a platform and then, beginning with the inner side of the wrinkled area, pry up the wrinkles with a proper prying tool and heat the “dead wrinkles” one by one with a welding torch at the same time. Finally all “dead wrinkles” are pried up and eased and converted into“live wrinkle”.

（3） Beat and smooth the “live wrinkles” from the inner side outward. The hammered spots should be near the most convex part of the “live wrinkles”. At the same time make sure the platform can support every beaten spot. When the wrinkles in one side of the plate are almost smoothed, turn it over to beat the other side till all wrinkles are completely spread out.

（4） Measure with a templet, and at the same time heat and beat the convex-concave part to restore it to its original shape.

（5） When the vehicle body is assembled, test with a templet again and make finer correction to achieve the final requirements.

（6） The seriously damaged wrinkles that can not be restored can be excised and repaired.

4.5. Welding of Four Doors and Two Covers

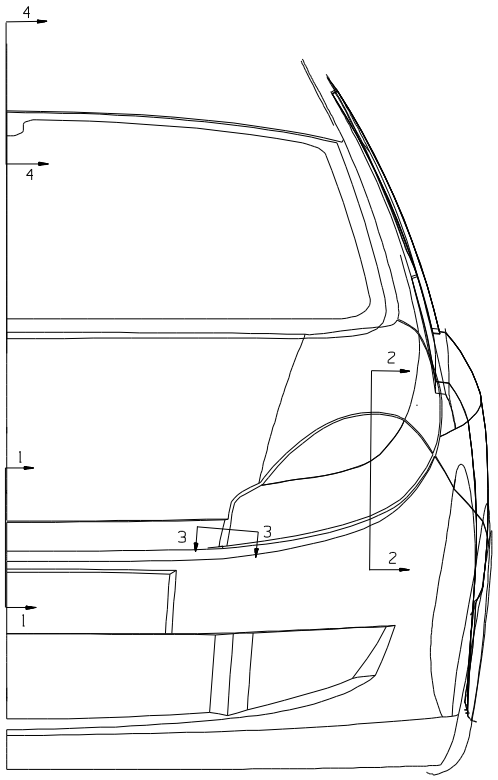
When welding the door panel, choose proper welding methods: gas welding (oxygen and acetylene welding), CO_2 shielded welding, manual arc welding, resistance spot welding, braze welding and so on. Besides, in order not to reduce the original strength and durability of the vehicle body, try to adopt the welding methods used in manufacturing the door panels, and the dimensions and types of all weld joints should be similar to those used by the original manufacturer.

As for appearance and quality, no burnt-through spots, half points, cracks, a lot of burrs or other defects should exist at the welded parts. The welded surface should be smooth and nice-looking, no obvious twist or deformation is allowed, and the indentation depth should be less than 1/5 of the plate thickness. Flat spade and iron hammer can be used to carry out non-destructive tests of the welded spots’ strength. Insert the flat spade between two welded spots to see if they are

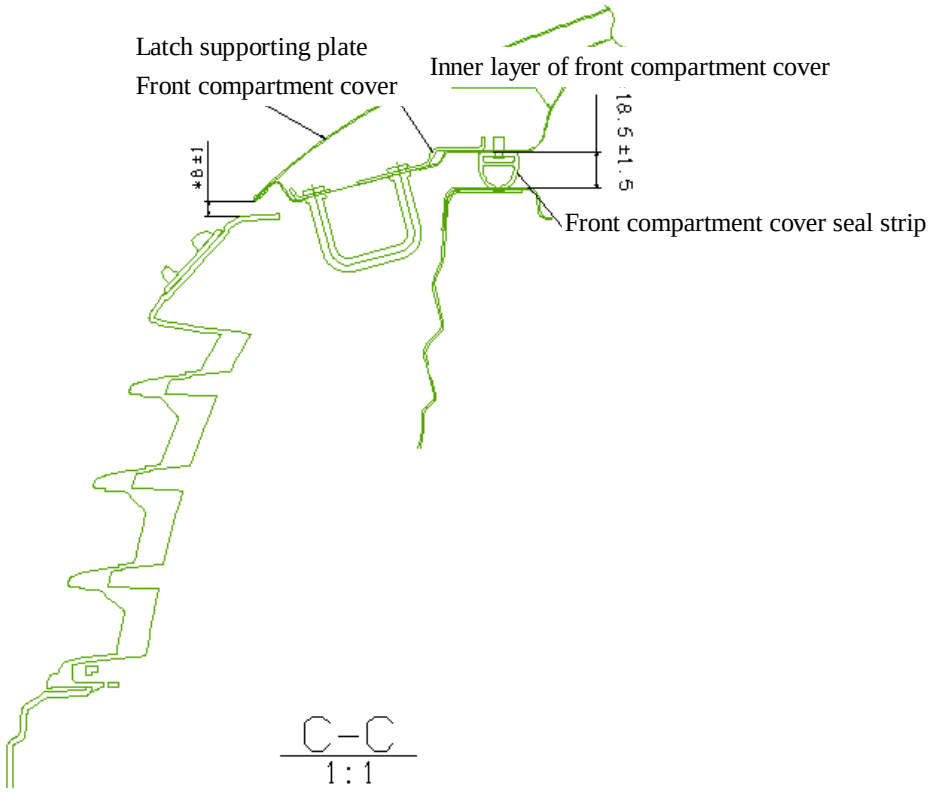
easy to separate, and then beat the welded part with an iron hammer to restore it. No welding spatter is allowed at the welded seam, and the overlapped seam should be nice-looking with no defects like air holes or cracks. Defects like undercut, welding beading and burning through are also not allowed.

II. Vehicle Body Assembly Dimensions

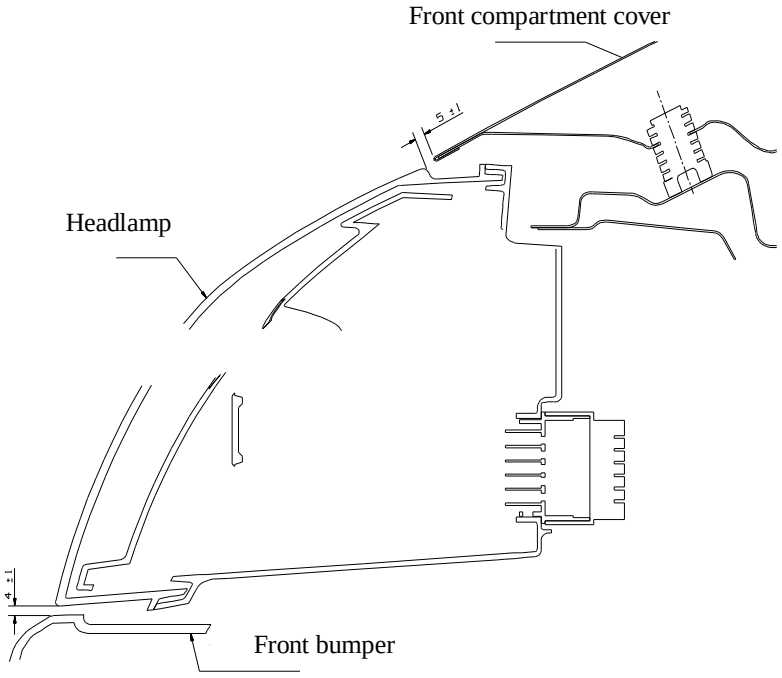
1. Front View



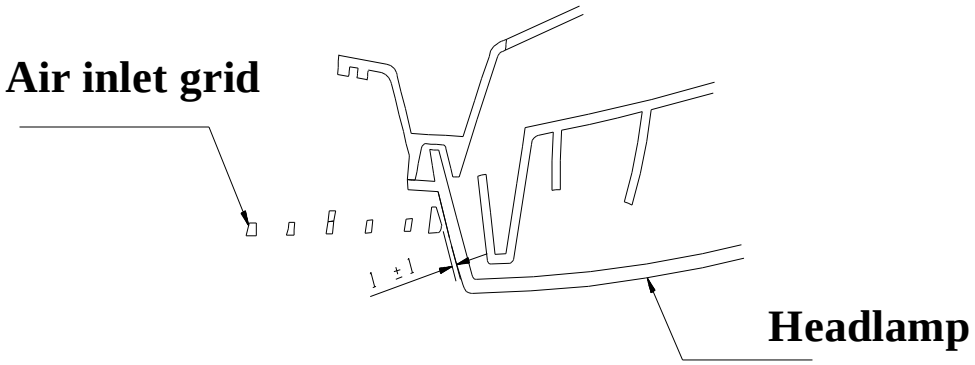
1.1. Clearance between front hood and air inlet grid at C-C: 8±1



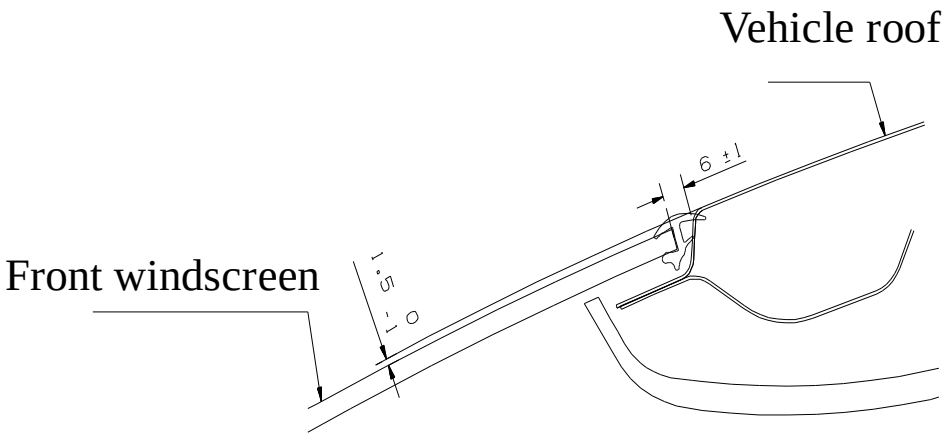
1.2. Clearance between front hood and headlamp at 2-2: 5±1mm



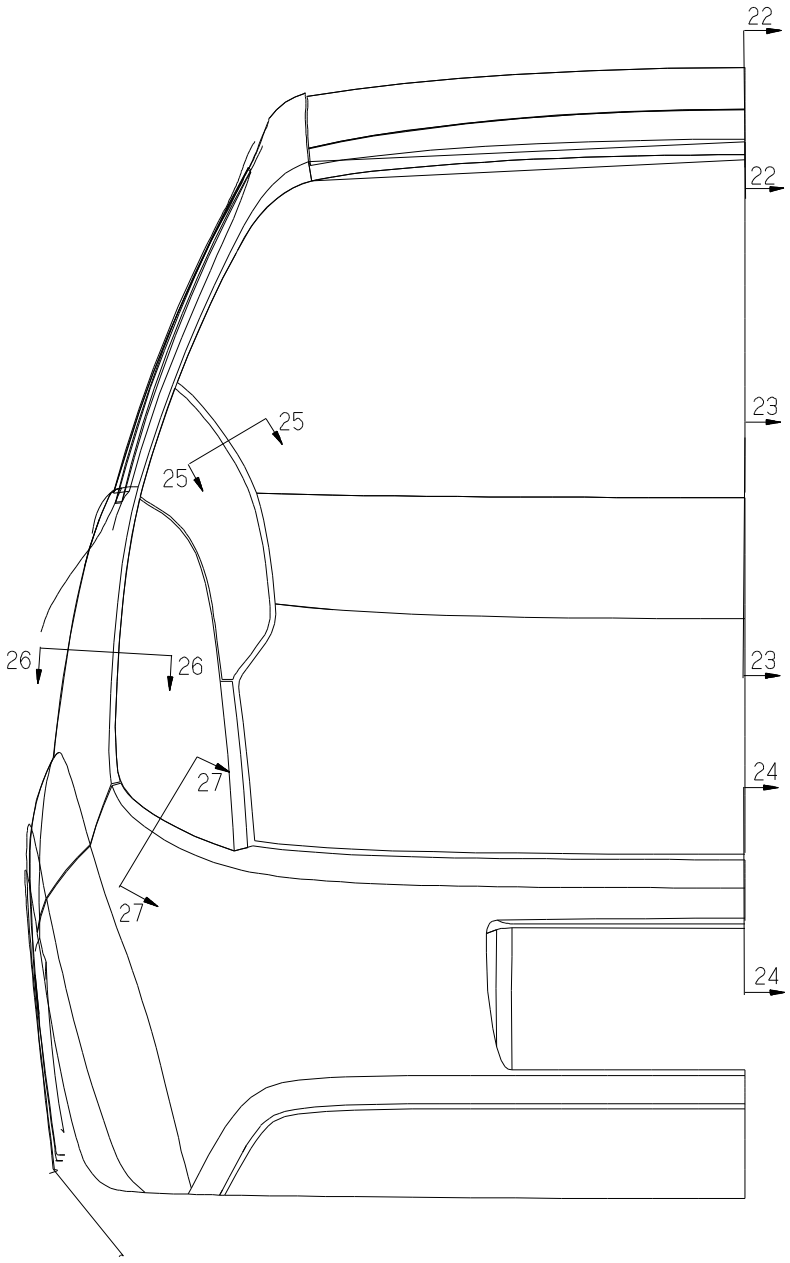
1.3. Clearance between headlamp and air inlet grid at 3-3: 1±1mm



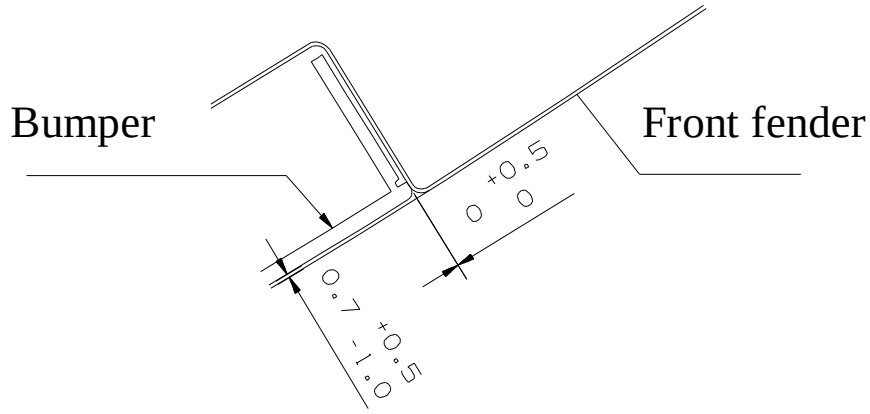
1.4. Clearance between the front windscreen and the vehicle roof at 4-4: 6±1mm



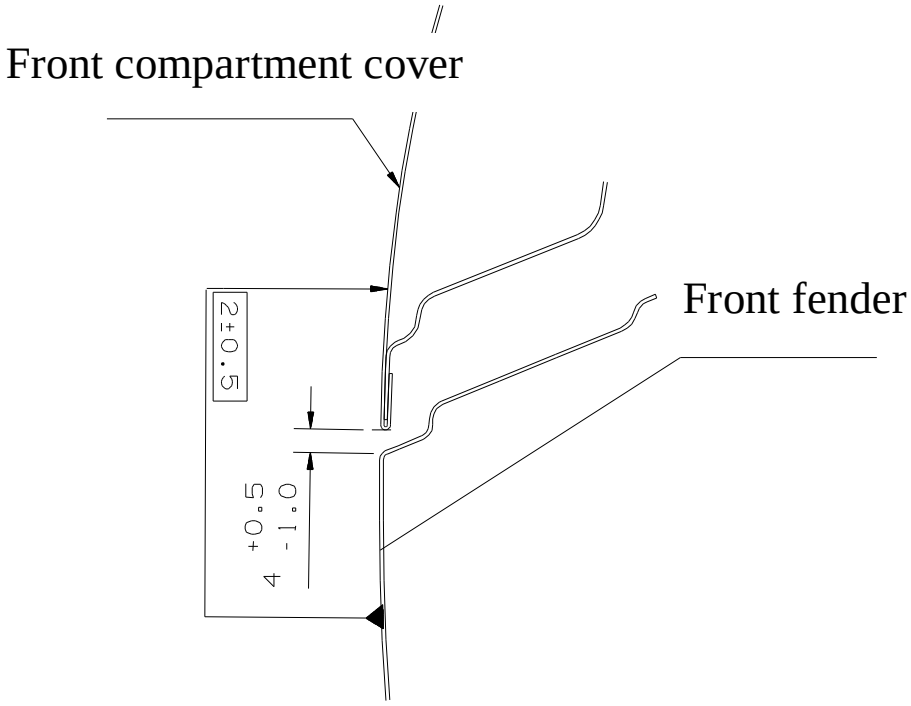
2. Left-front View



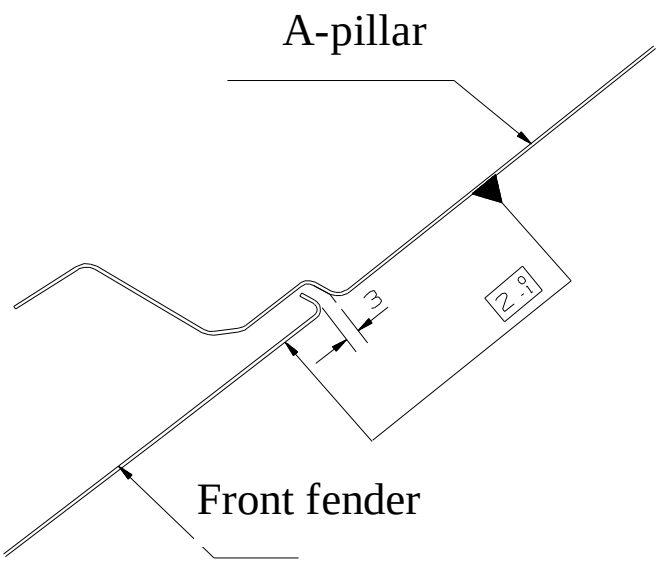
2.1. Clearance between front bumper and front fender at 5-5: $0^{+0.5}_{0}$ mm



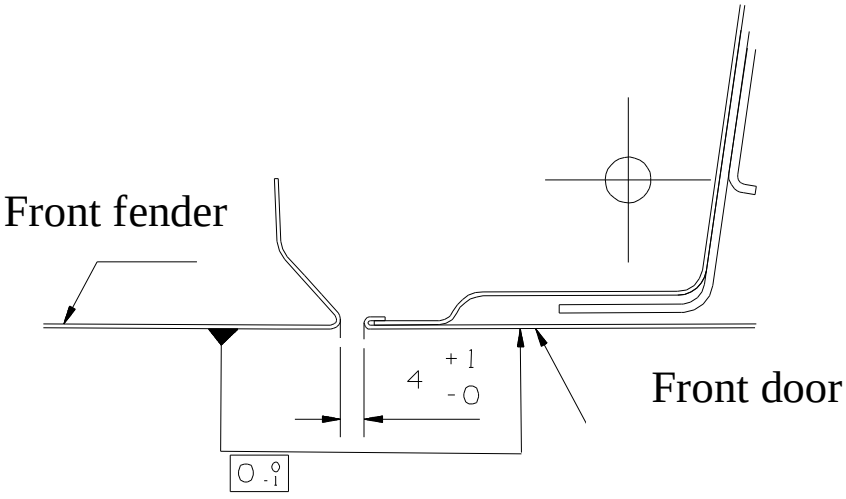
2.2. Clearance between front hood and front fender at 6-6: 4mm



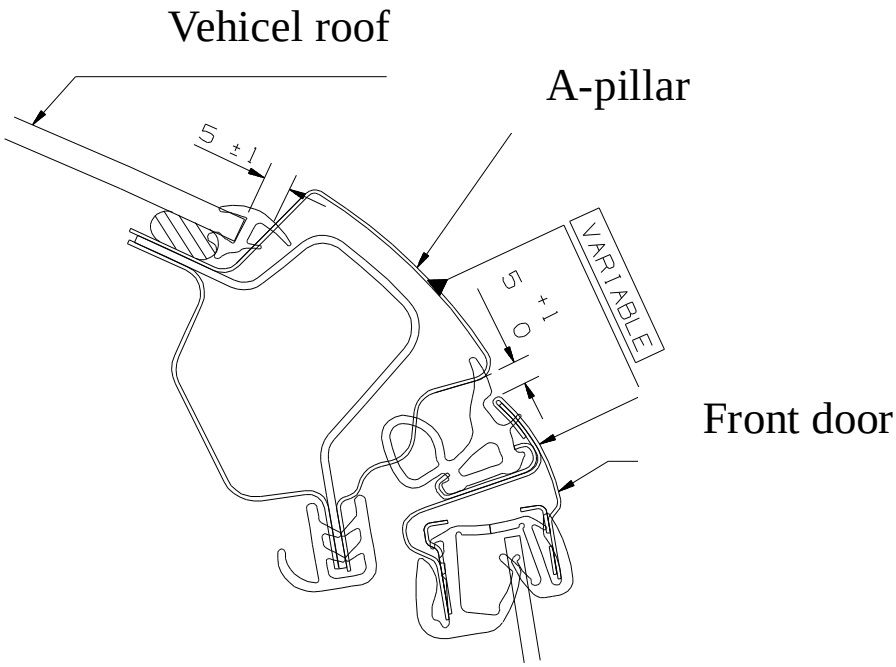
2.3. Clearance between front fender and A-pillar (side wall) at 7-7: 3mm



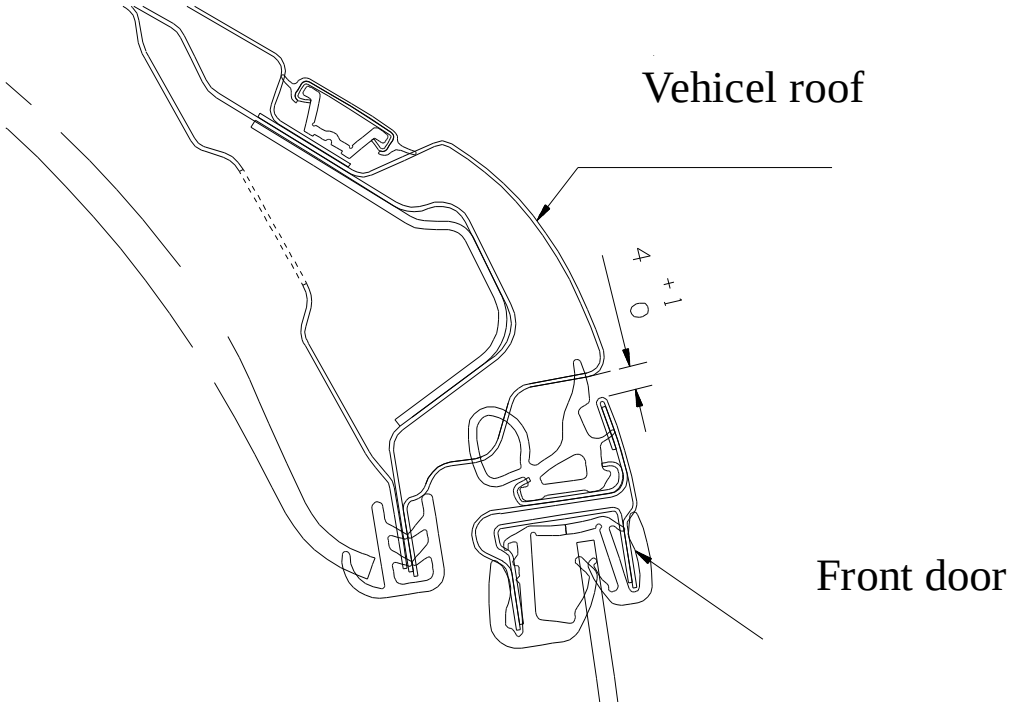
2.4. Clearance between front fender and front vehicle doors at 8-8: 4^{+1}_{0} mm



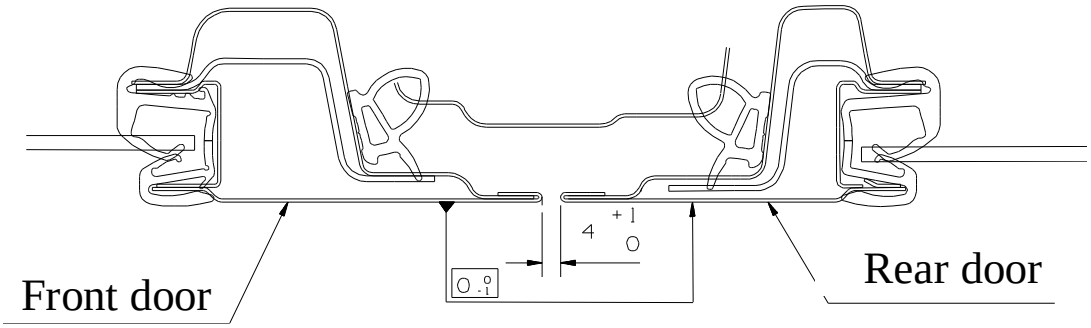
2.5. Clearance between front door and A-pillar (Side wall) at 9-9: 5±1mm



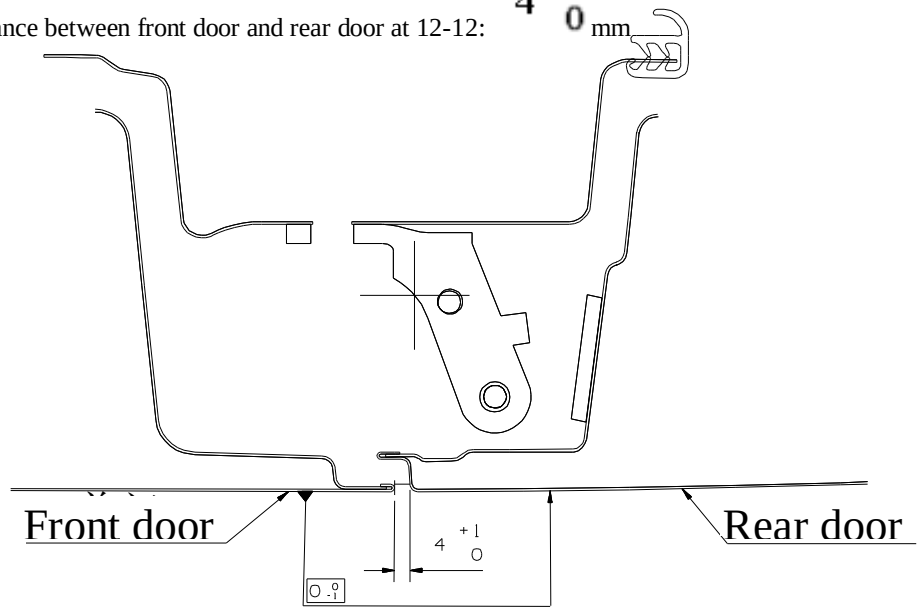
2.6. Clearance between front vehicle doors and vehicle roof 10-10: 4_0^{+1} mm



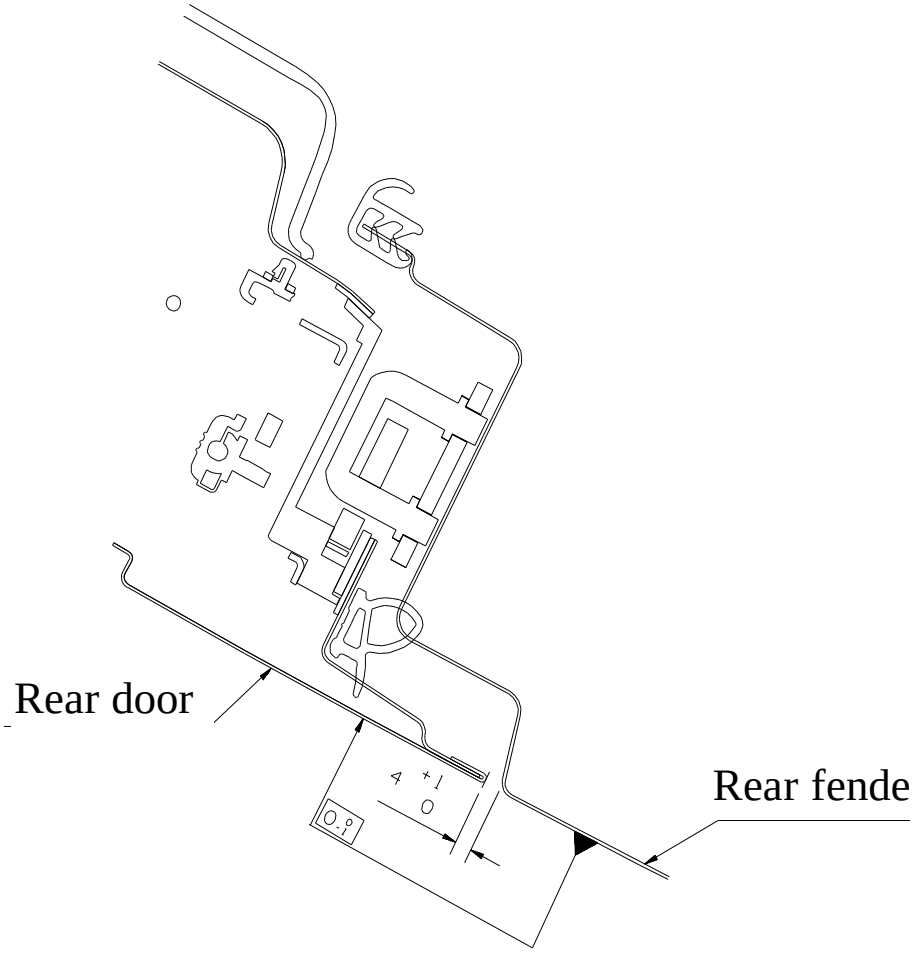
2.7. Clearance between front door and rear door at 11-11: 4^{+1}_{0} mm



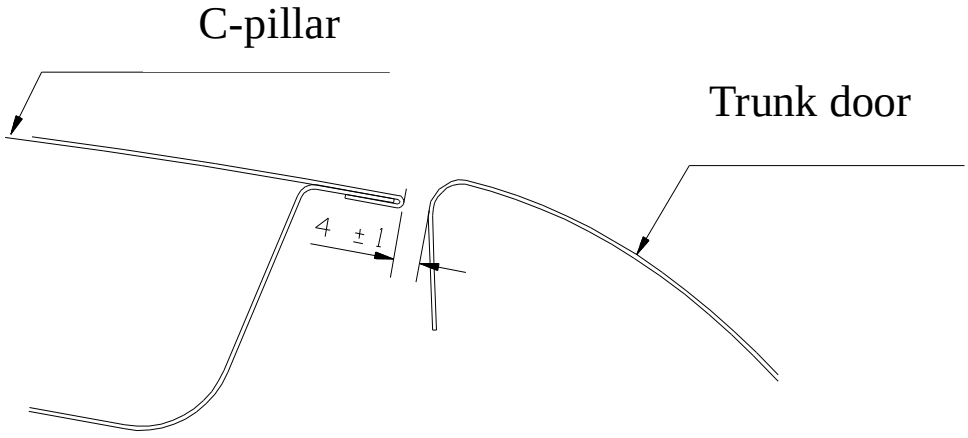
2.8. Clearance between front door and rear door at 12-12: 4^{+1}_{0} mm



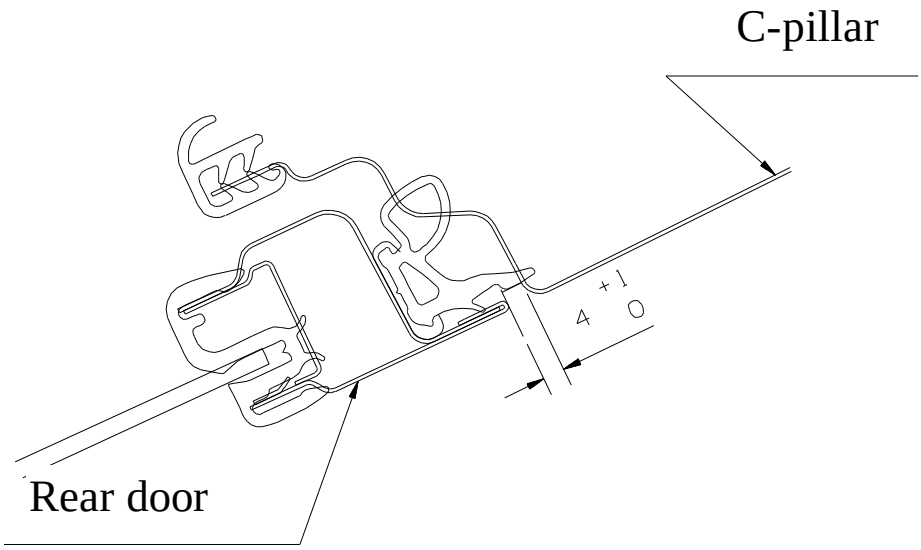
2.9. Clearance between rear door and rear fender (side wall) at 13-13: 4^{+1}_{0} mm



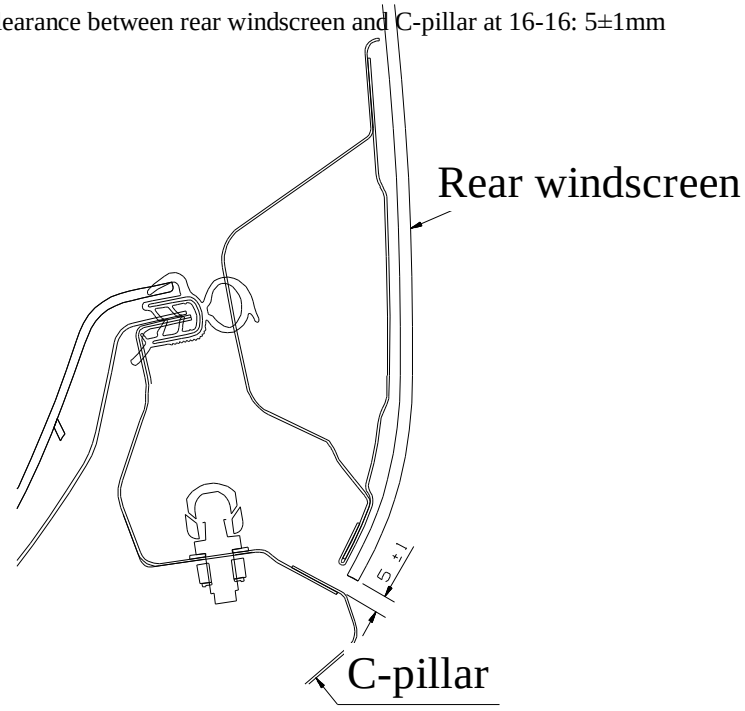
2.10. Clearance between rear door and rear fender (side wall) at 14-14: 4^{+1}_{0} mm



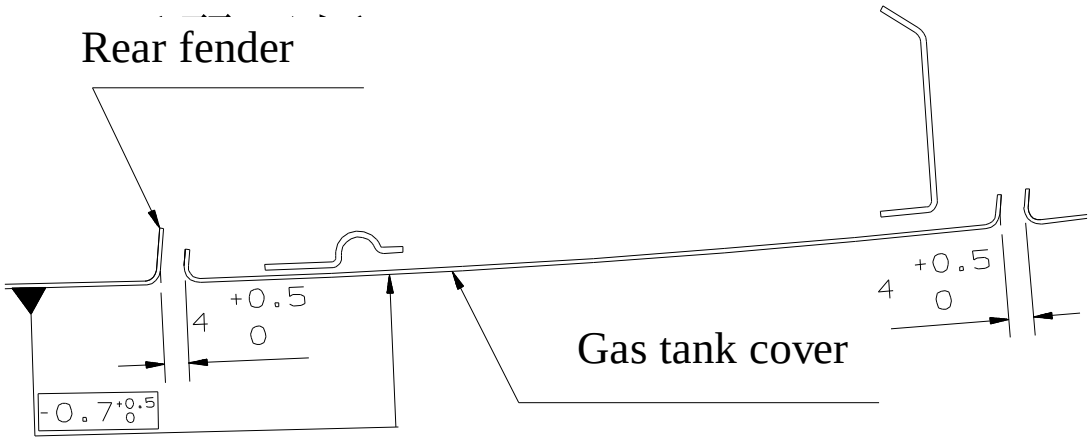
2.11. Clearance between rear door and C-pillar at 15-15: 4^{+1}_{0} mm



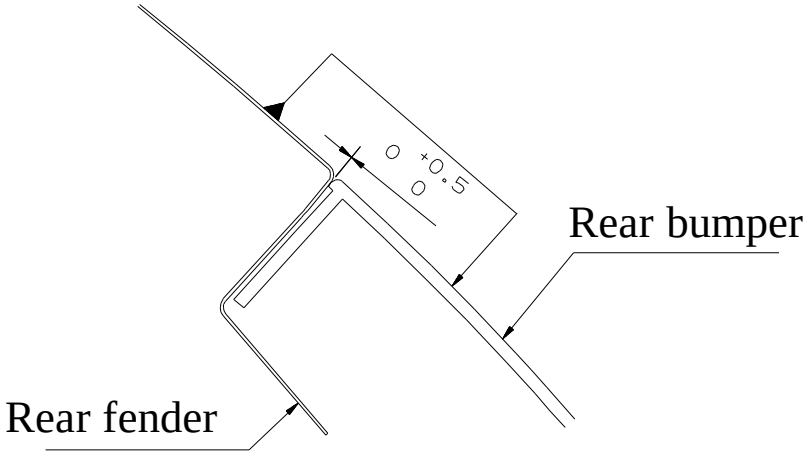
2.12. Clearance between rear windscreen and C-pillar at 16-16: 5±1mm



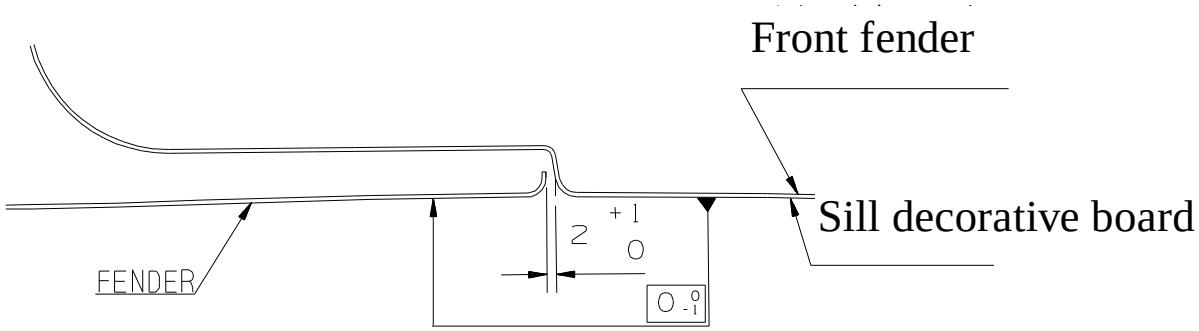
2.13. Clearance between gas tank cover and rear fender (side wall) at 17-17 and 18-18: $4_{0}^{+0.5}$ mm



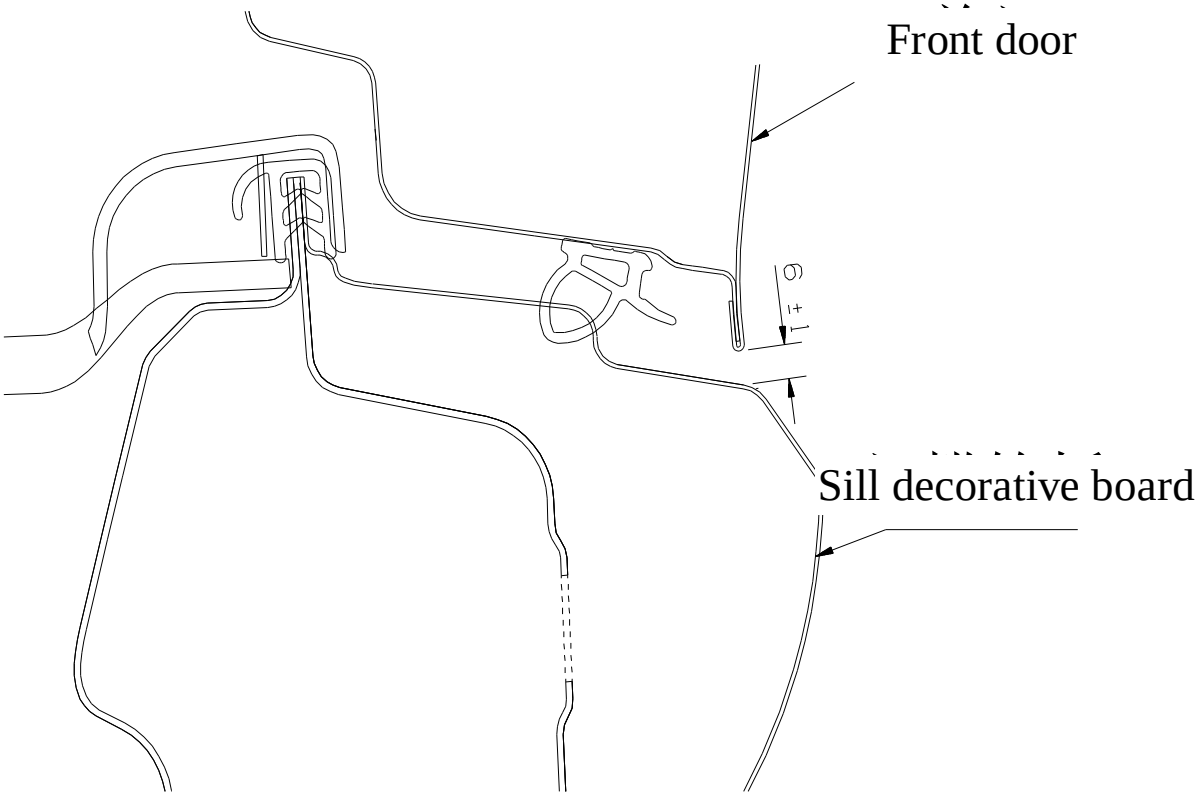
2.14. Clearance between rear bumper and rear fender at 19-19: $0_{0}^{+0.5}$ mm



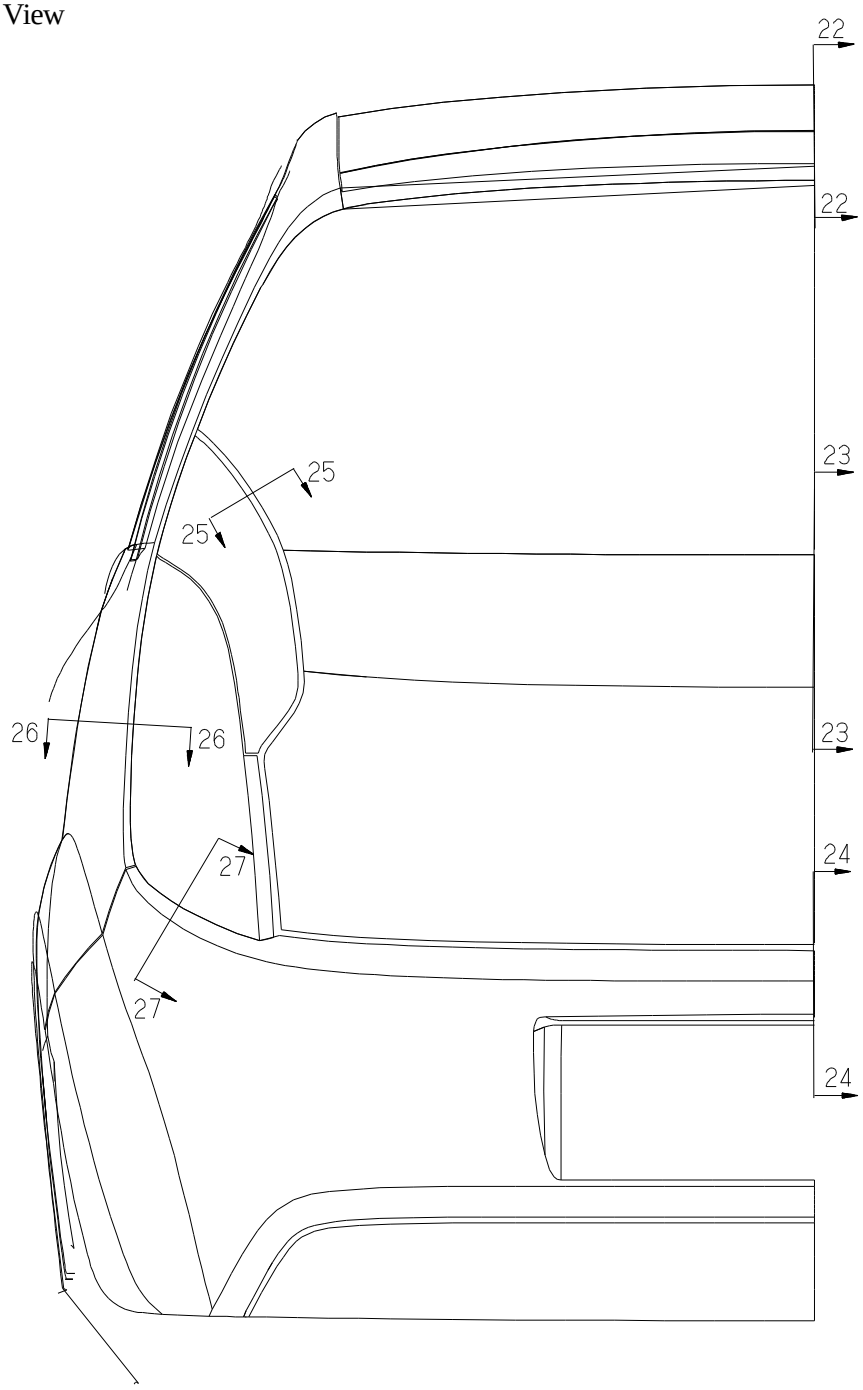
2.15. Clearance between front fender and sill decorative board (side wall) at 20-20: 2^{+1}_{0} mm



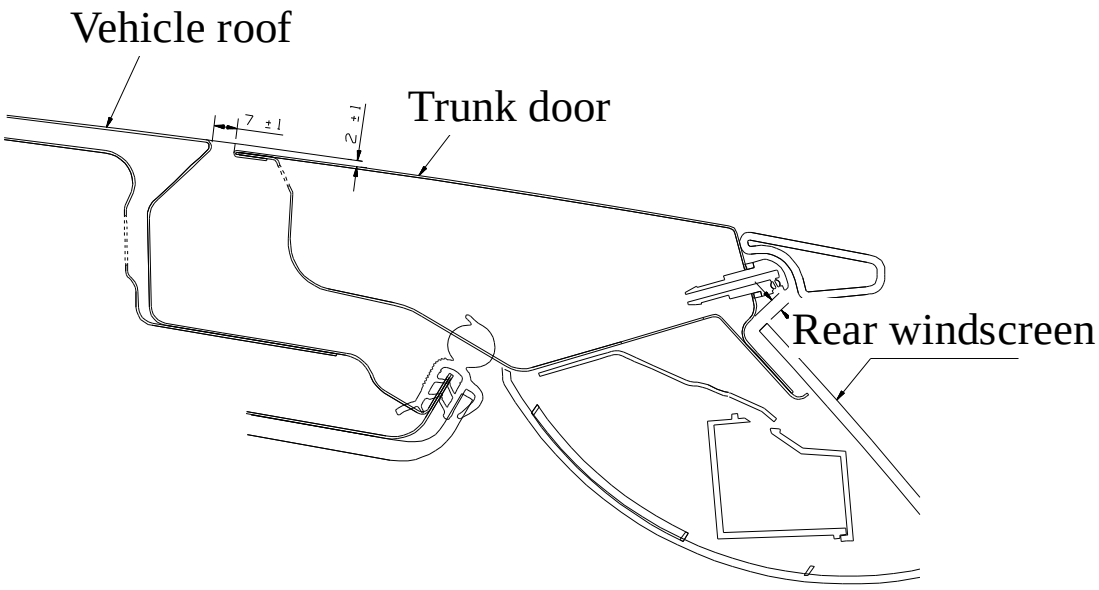
2.16. Clearance between front door and sill decorative board (side wall) at 21-21: 6±1mm



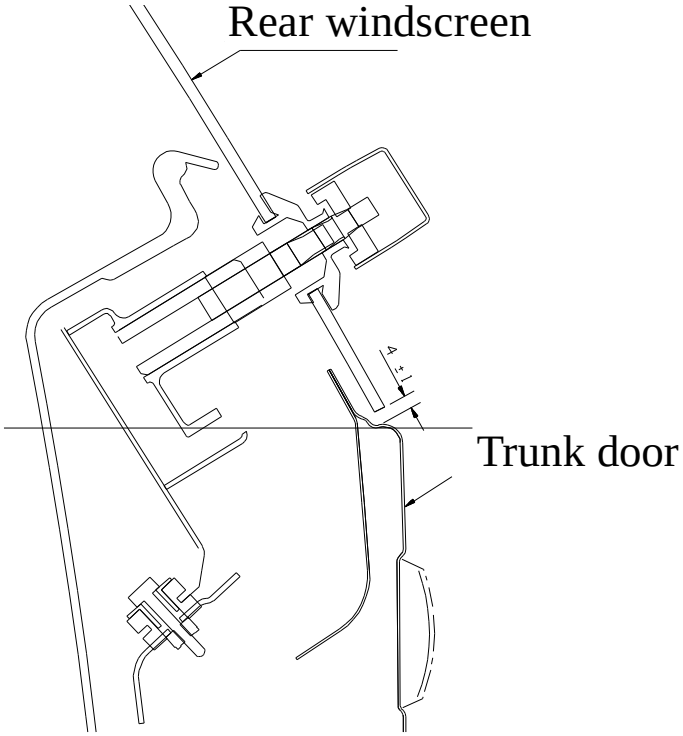
3. Back View



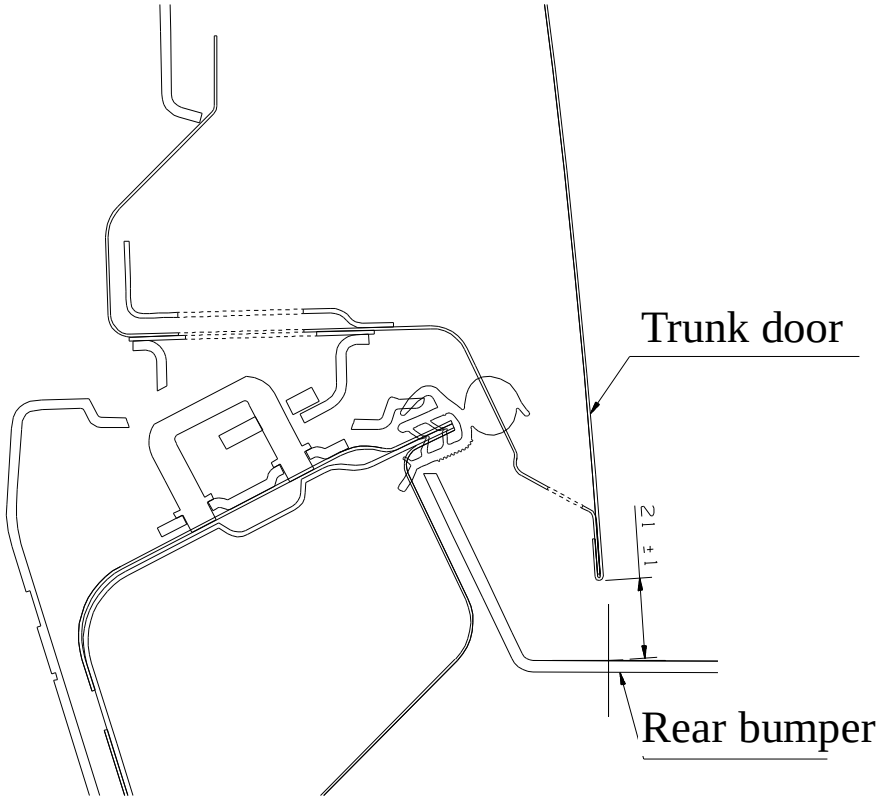
3.1. Clearance between vehicle roof and trunk door at 22-22: 7±1mm



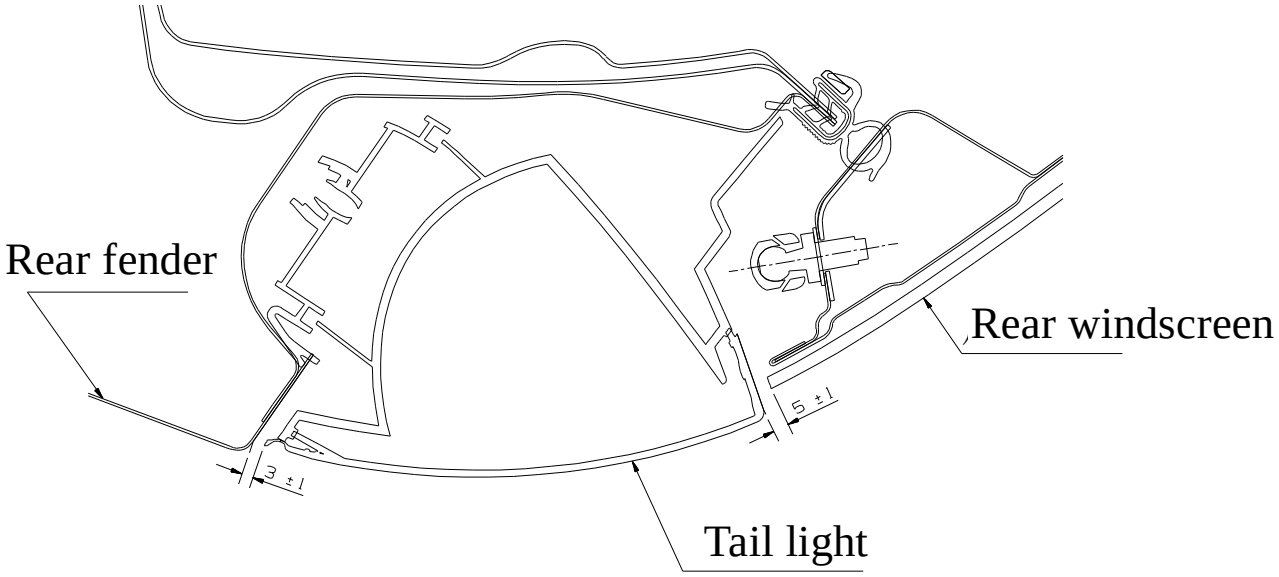
3.2. Clearance between rear windscreen and trunk door at 23-23: 4±1mm



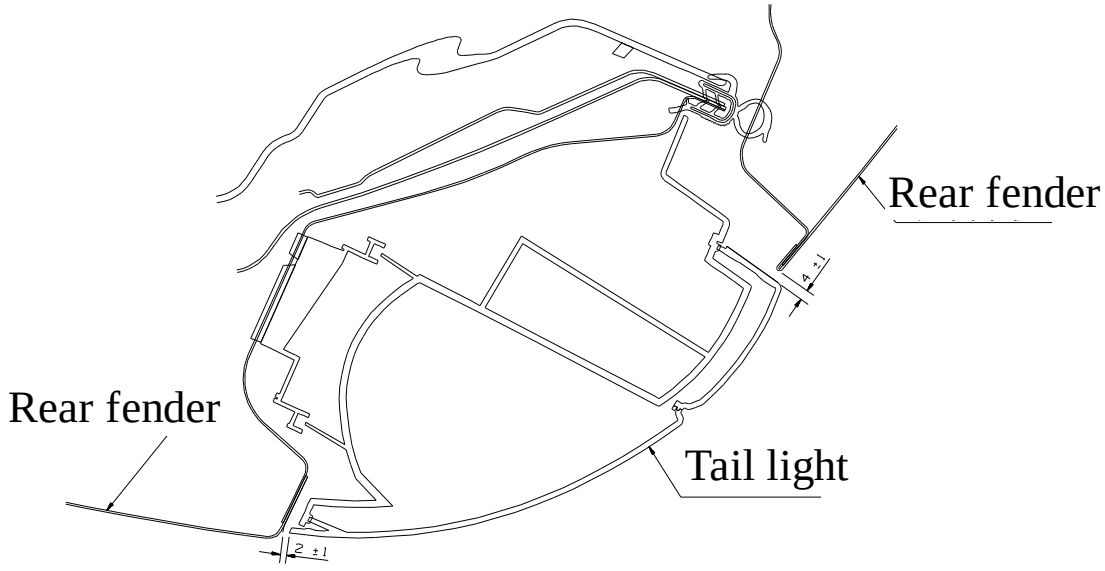
3.3. Clearance between trunk door and rearbumper at 24-24: 21±1mm



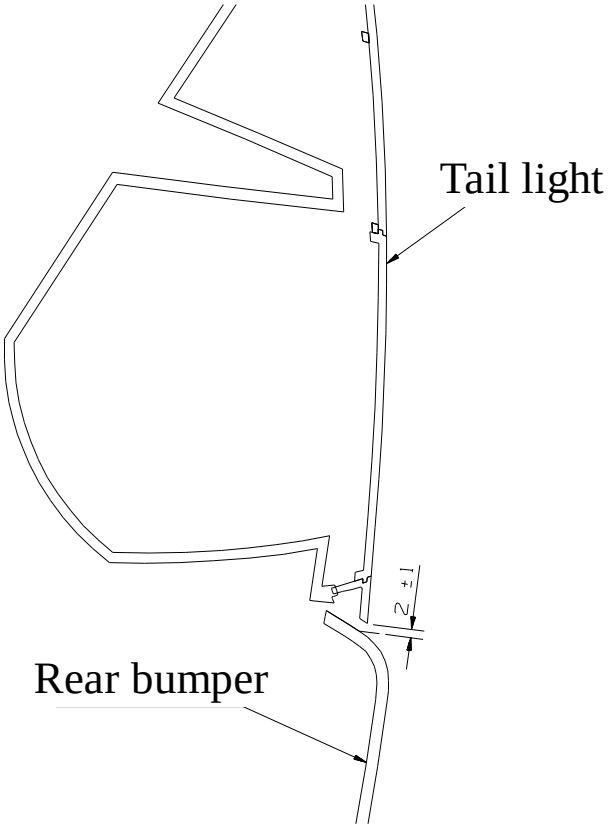
3.3. Clearance between rear windscreen and tail light at 25-25: 5±1mm



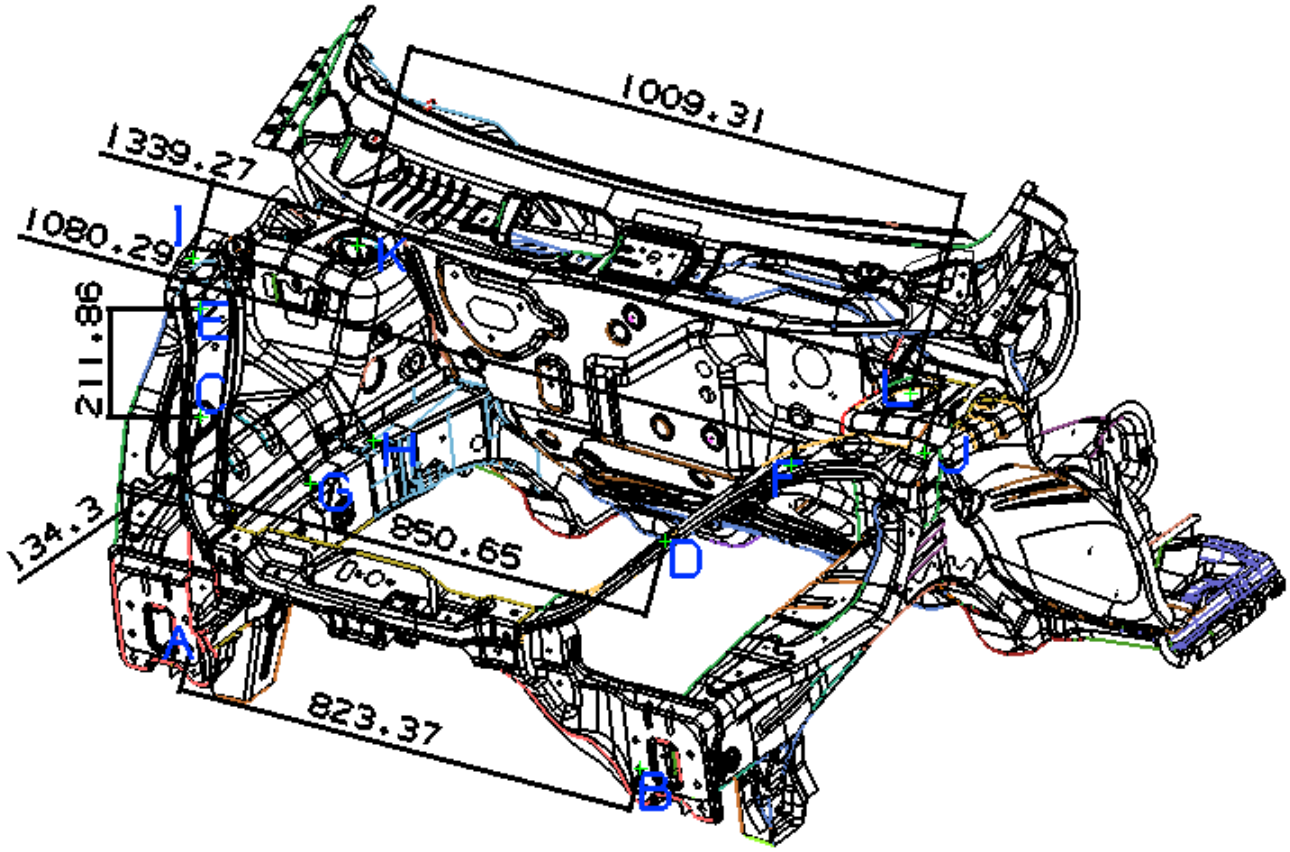
3.4. Clearance between tail lights and rear fender (side wall) at 26-26: 4±1mm



3.5. Clearance between tail light and rear bumper at 27-27: 2±1mm

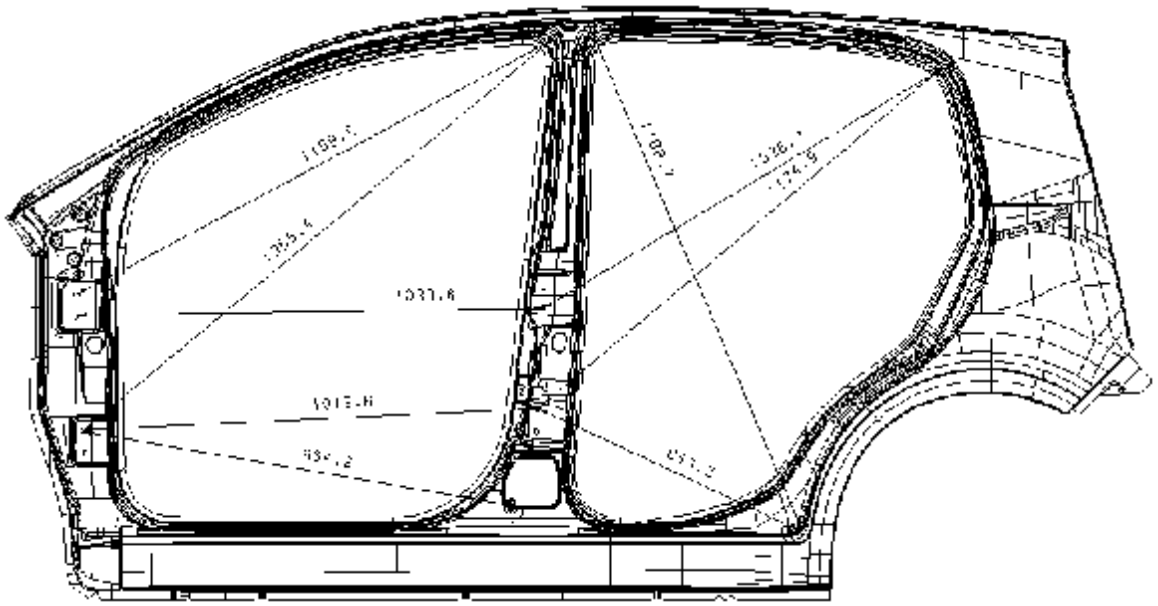


III. Engine Compartment Dimensions

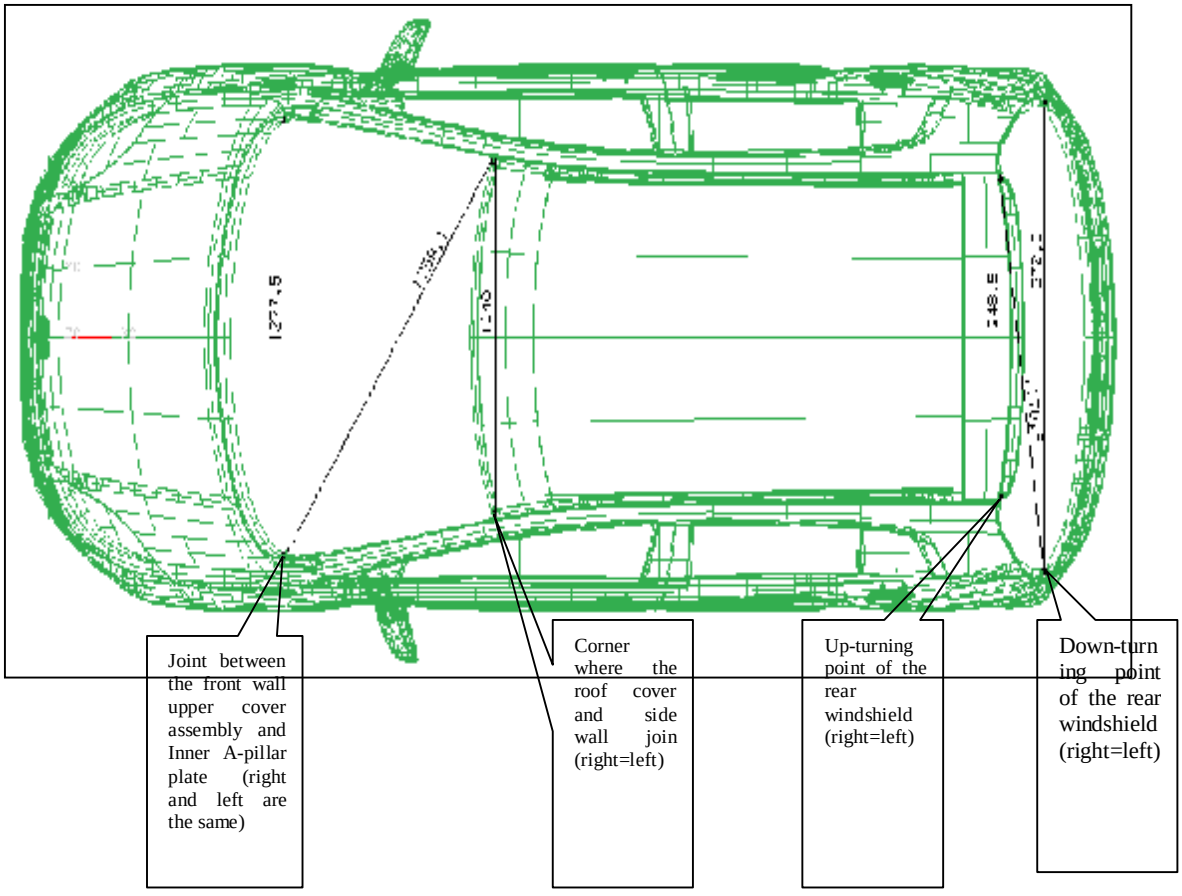


No	Name	Diameter
A/B	Front bumper crossbeam mounting hole	Φ11
C/D/E/F	Headlight mounting hole	Φ7
G/H	Engine right suspension bracket mounting hole	Φ13
I/J	Installation of fender	Φ8
K/L	Shock absorber mounting hole	Φ76

IV. Various Opening Dimensions



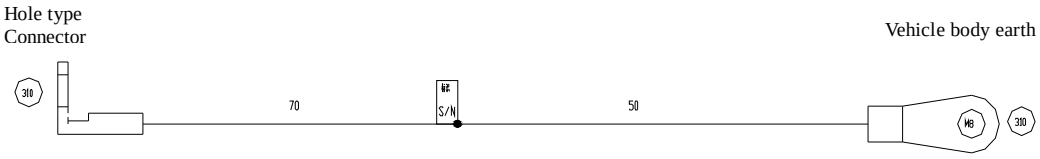
V. Windshield Dimensions


Joint between the front wall upper cover assembly and Inner A-pillar plate (right and left are the same)
Corner where the roof cover and side wall join (right=left)
Up-turning point of the rear windshield (right=left)
Down-turning point of the rear windshield (right=left)

Chapter X Harness

Section I Battery Negative Harness

I. Harness Sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	Hole type joint	1	Battery Negative	
2	Vehicle body ground	1	Vehicle body	Below left-front fender

III. Removal and Installation of Battery Harness

Part number: S12-3703010AC

(I). Preparations

Tools: 10#. 13# wrench

(II). Notes

Make sure to disconnect the power supply when disassembling the electrical components and harnesses.
Ignition switch must be OFF.

(III). Removal Steps

1. Removal
1.1. Use a 10# wrench to remove the battery positive.

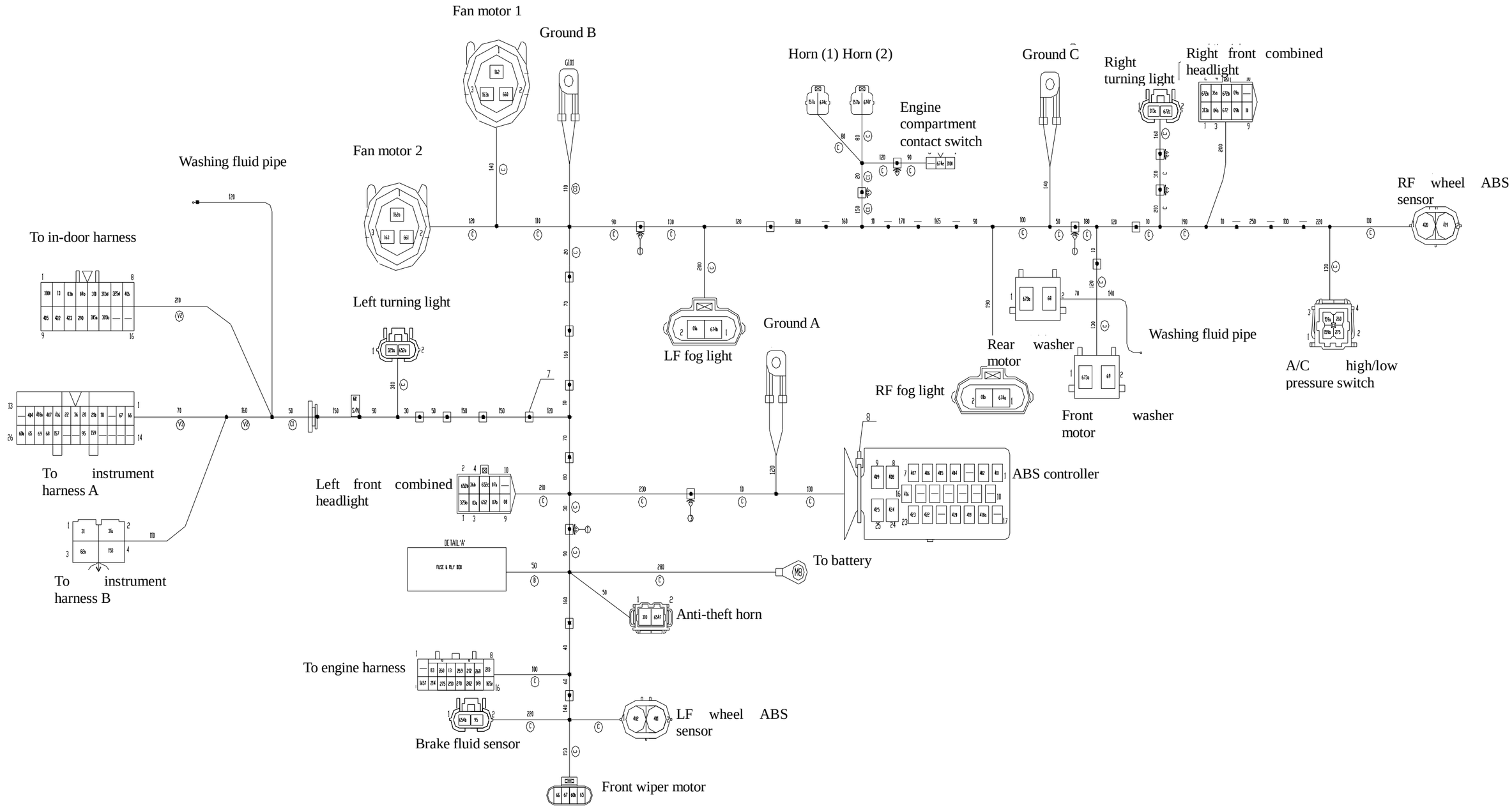
1.2. Use a 10# wrench to loosen off the battery negative.

1.3. Use a 13# wrench to loosen off the battery negative harness
Remove the battery negative harness at the vehicle body ground wire.

2. Installation
The installation steps are reverse to those for removal.

Section II Front Compartment Harness

I. Harness Sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	In-door harness connector	16	In-door harness	
2	Instrument harness A connector	26	Instrument harness A	
3	Instrument harness B connector	4	Instrument harness B	
4	Washing fluid piping			
5	ABS connector	25	ABS	
6	Ground A		Vehicle body	ABS on the left-front side member
7	Left-front combination headlights connector	10	Left-front combination headlights	
8	Fuse box		Fuse box	
9	Anti-theft speakerconnector	2	Anti-theft speaker	
10	Connect the battery		Battery	
11	Engine harness connector	16	Engine harness	
12	Brake fluid level sensor connector	2	Brake fluid level sensor	
13	Front wiper motor connector	4	Front wiper motor	
14	Left-front wheel ABS sensor connector	2	Left-front wheel ABS sensor	
15	Left turning light connector	2	Left turning light	
16	Fan motor 1 connector	3	Fan motor 1	
17	Fan motor 2 connector	3	Fan motor 2	
18	Ground B		Vehicle body	Fan on the left-front side member
19	Left-front fog lights connector	2	Left-front fog lights	
20	Speaker 1 connector	2	Speaker 1	
21	Speaker 2 connector	2	Speaker 2	
22	Front compartment contact switch connector	3	Front compartment contact switch	
23	Ground C		Vehicle body	Washer solution tank on the right-front side member
24	Right-front fog light connector	2	Left-front fog light	
25	Front washing motor connector	2	Front washing motor	
26	Rear washing motor connector	2	Rear washing motor	
27	Washing fluid pipe			
28	Right turning light connector	2	Left turning light	
29	Right-front combination headlight connector	10	Right-front combination headlight	
30	Right-front wheel ABS sensor connector	2	Right-front wheel ABS sensor	
31	Air-conditioner high/low voltage switch connector	4	Air-conditioner high/low voltage switch	

III. Removal and Installation of Front Compartment Harness

Part number: S12-3724010

(I). Preparations

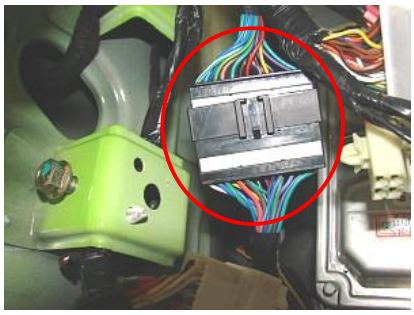
Tools: sleeve wrench, cross head screwdriver, flat head screwdriver

(II). Notes

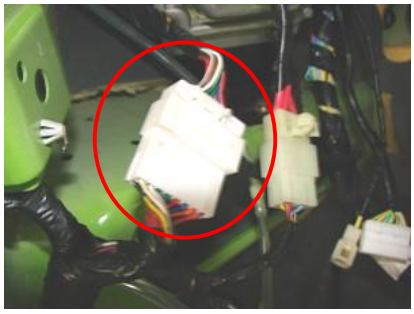
Make sure to disconnect the power supply when disassembling the electrical components and harnesses.
The ignition switch must be OFF.

(III). Removal Steps

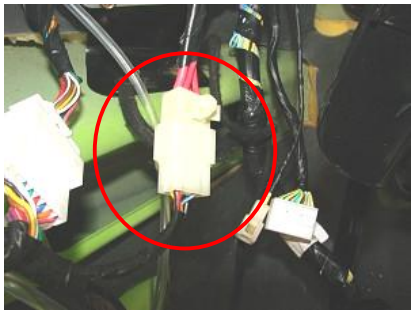
1. Removal
1.1.1. Remove the left-down shield of the Instrument Panel. (See Removal and Installation of Instrument Panel)
1.1.2. Unplug the in-door harness connector.



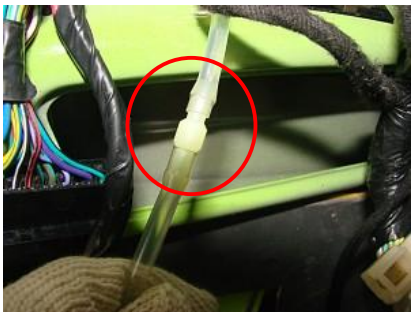
1.1.3. Unplug the connector of instrument harness A.



1.1.4. Unplug the connector of instrument harness B.

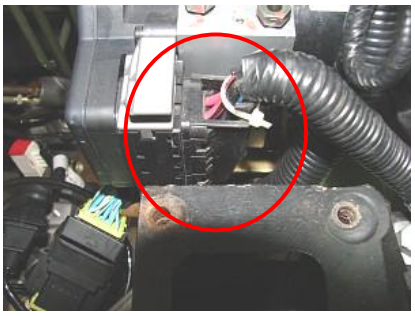


1.1.5. Unplug the washing fluid piping connector.

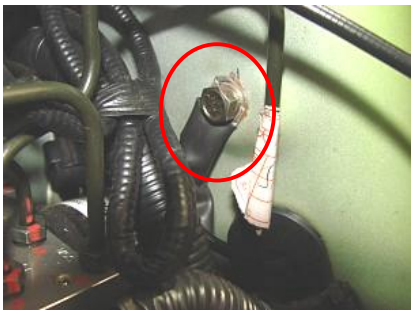


1.1.5. Disassemble the battery. (See Removal and Installtion of Battery).

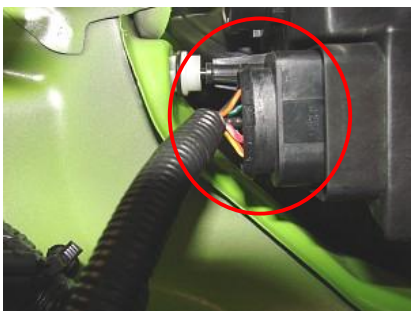
1.1.6. Unplug the ABS plug.



1.1.7. Remove the ground wire. (ABS on left-front side member)



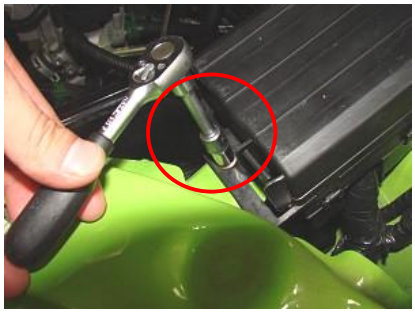
1.1.8. Unplug the connector to left headlight.



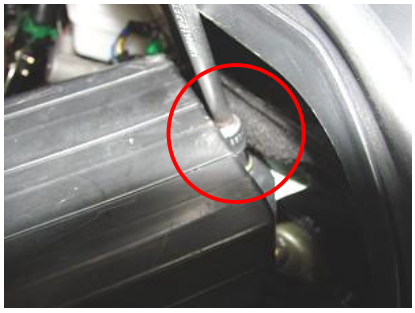
1.1.9. Unplug the connector of left-front fog light.

1.1.10. Unplug the engine harness connector.

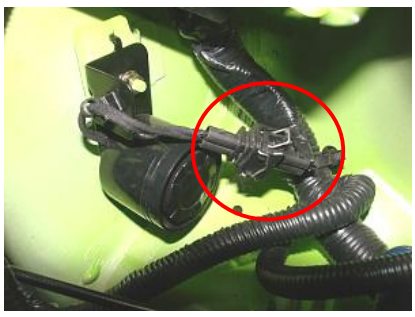
1.1.11. Use a sleeve wrench to loosen off the lower fixing screws of the fuse box.



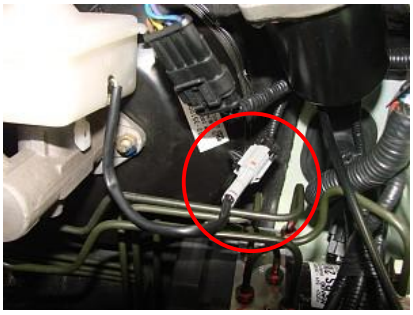
1.1.12. Use a sleeve wrench to loosen off the upper fixing screws of the fuse box.



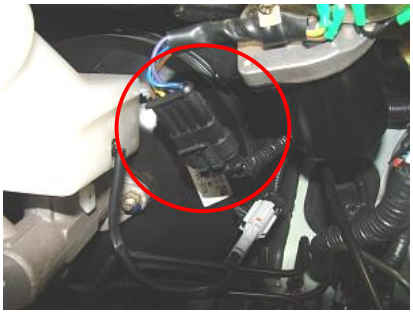
1.1.13. Unplug the connector to the anti-theft speaker.



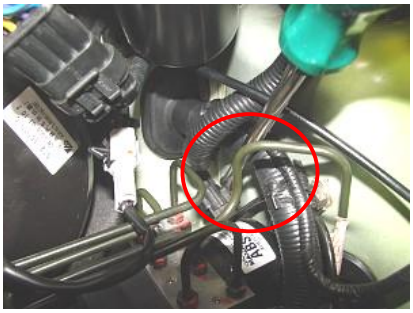
1.1.14. Unplug the connector to the brake fluid level sensor.



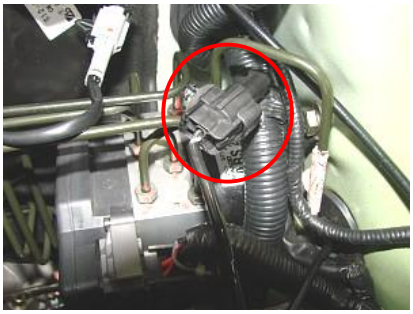
1.1.15. Unplug the connector to the wiper motor



1.1.16. Use a flat head screwdriver to pry out the left-front wheel ABS sensor plug fixed on the vehicle body. (Near ABS)



1.1.17. Unplug the left-front wheel ABS sensor plug.

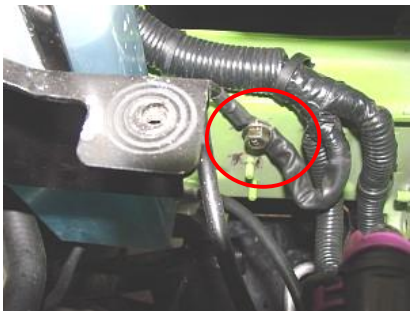


1.1.18. Use a flat head screwdriver to pry open the left-front turning light.

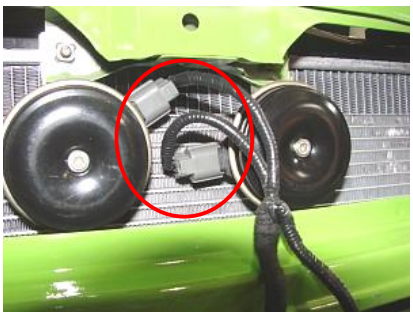
1.1.19. Unplug the plug of the left-front turning light.

1.1.20. Unplug the two connectors of the fan motor.

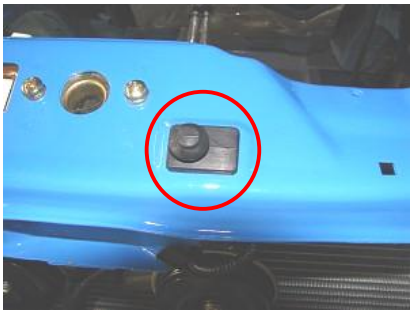
1.1.21. Loosen off the ground wire on the side member. (Fan)



1.1.22. Unplug the two connectors to the speaker.

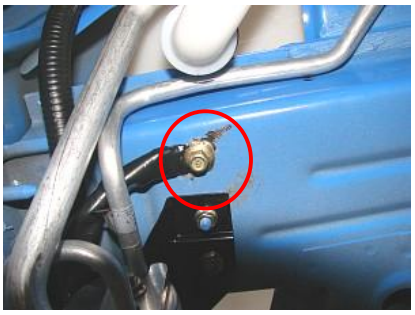


1.1.23. Disassemble the front compartment contact switch.



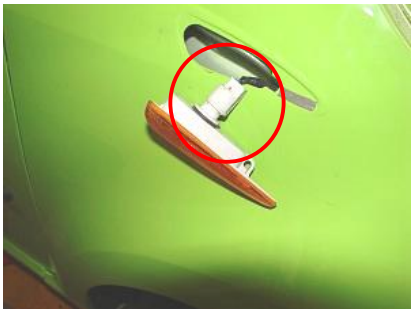
1.1.24. Unplug the connectors of the front/rear washing motors.

1.1.25. Disassemble the ground wire. (Washing fluid tank on the right-front side member)

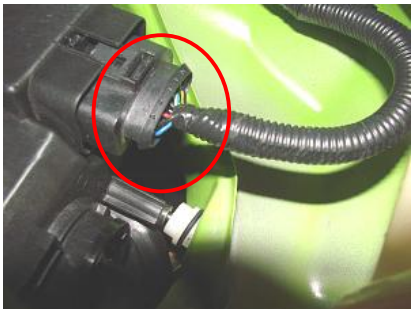


1.1.26. Use a flat head screwdriver to pry open right-front turning light.

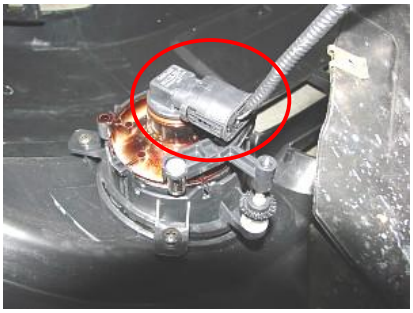
1.1.27. Unplug the plug of the right-front turning light.



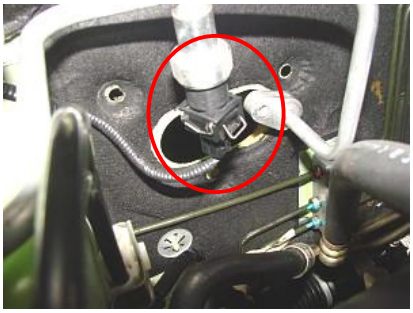
1.1.28. Unplug the right headlight connector.



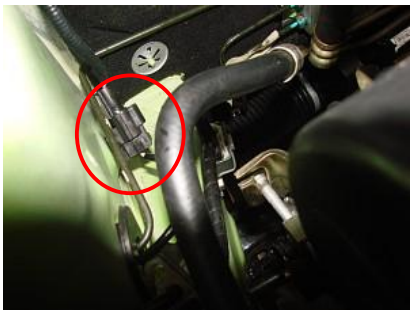
1.1.29. Unplug the right-front fog light connector.



1.1.30. Unplug the high/low voltage switch plug of the air-conditioner.



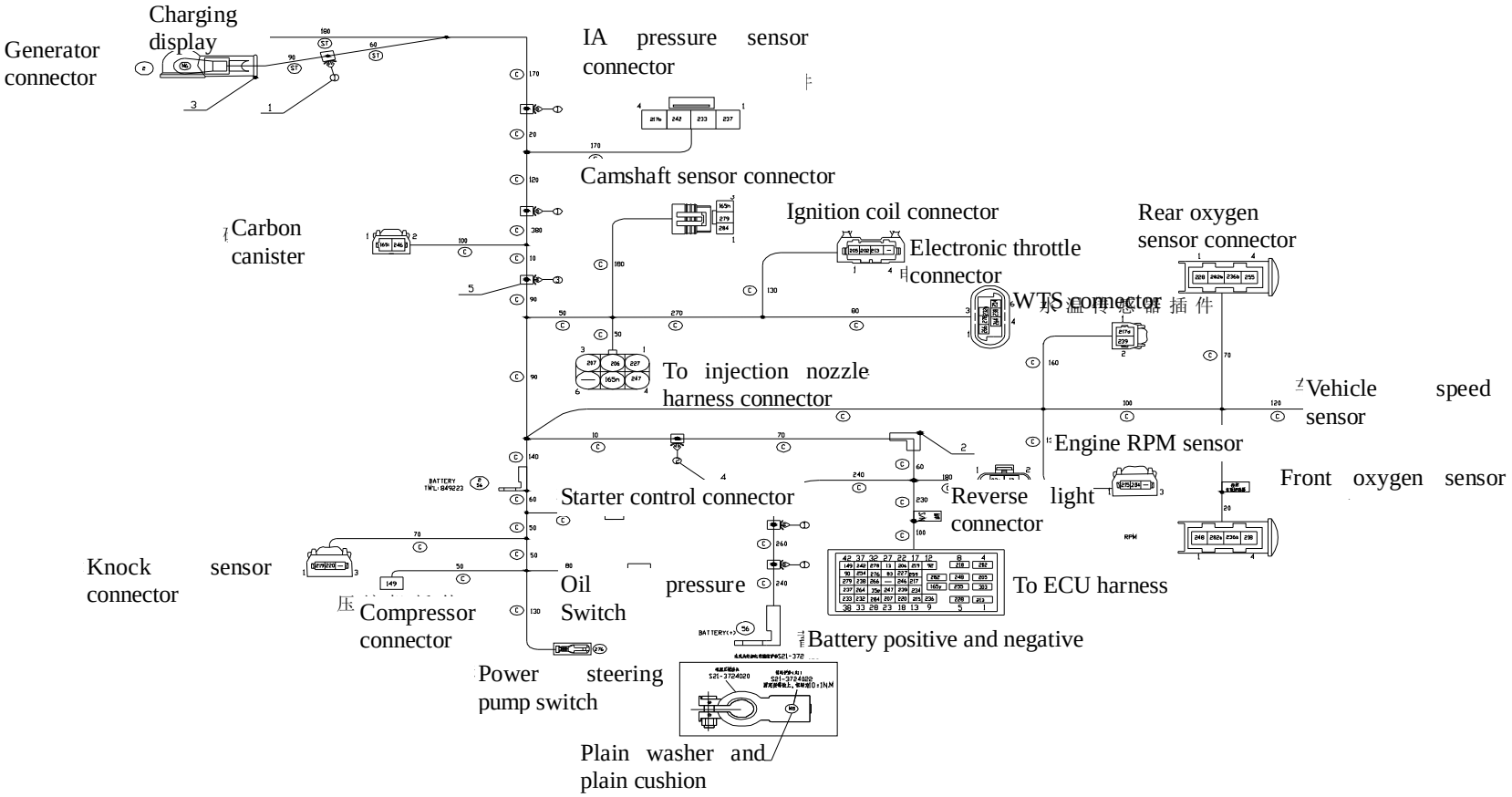
1.1.31. Unplug the right-front wheel ABS sensor plug.



2. Installation
The installation steps are reverse to those for removal.

Section III Removal and Installation of Electronic Fuel Injection Harness

I. Harness Sketch



II. Instructions on Harness Connectors

No	Connector Name	Pins	Connection
1	Recharging display connector	1	Ground
		2	To ECU harness connector
2	Motor connector	1	——
3	Intake pressure sensor	1	To ECU harness connector
		2	To ECU harness connector
		3	To ECU harness connector
		4	Ground
4	Carbon canister solenoid valve connector	1	Ground
		2	To ECU harness connector
5	Camshaft sensor connector	1	To ECU harness connector
		2	To ECU harness connector
		3	Ground
6	Oil nozzle harness connector	1	To ECU harness connector
		2	To ECU harness connector
		3	To ECU harness connector
		4	To ECU harness connector
		5	Ground
		6	——
7	Ignition coil connector	1	To ECU harness connector
		2	To ECU harness connector
		3	To ECU harness connector
		4	——
8	Electronic throttle connector	1	To ECU harness connector
		2	To ECU harness connector
		3	Ground
		4	To ECU harness connector
		5	To ECU harness connector
		6	To ECU harness connector

9	Water thermostat connector	1	Ground
		2	To ECU harness connector
10	Engine rotation speed sensor connector	1	To ECU harness connector
		2	To ECU harness connector
		3	——
11	Rear oxygen sensor connector	1	To ECU harness connector
		2	Ground
		3	Ground
		4	To ECU harness connector
12	Front oxygen sensor connector	1	To ECU harness connector
		2	Ground
		3	Ground
		4	To ECU harness connector
13	Vehicle speed sensor connector	1	To ECU harness connector
		2	To ECU harness connector
		3	To ECU harness connector
14	Starter controller connector	1	To ECU harness connector
15	Knock sensor connector	1	To ECU harness connector
		2	To ECU harness connector
		3	——
16	Oil pressure switch connector	1	To ECU harness connector
17	Compressor connector	1	To ECU harness connector
18	Power steering pump switch connector	1	To ECU harness connector
19	Reverse light switch connector	1	Ground
		2	To ECU harness connector

III. Removal and Installation of Harness

Part number: S12-3724180
Tools: flat head screwdriver, cross head screwdriver, sleeve wrench
Notes:
(1) The ignition switch must be OFF.
(2) When disassembling the electrical components and harnesses, disconnect the power supply.
(3) When disassembling common plugs (connectors), first press down the locking device, and then separate the plug and socket by force. Be careful not to pull at the wires so as not to damage the wires and connectors.

1. Removal Steps

1.1. Removal of battery and air filter.
1.1.1. Disconnect the battery negative.

1.1.2. Loosen off the battery positive and remove the battery assembly.

1.1.3. Use a sleeve wrench to loosen off the air filter fastening nuts.

1.1.4. Use a sleeve wrench to loosen off the inlet air filter fastening nuts.

1.1.5. Pull out the hose that connects the air filter and engine inlet manifold by hand.

1.1.6. Remove the air filter.

1.1.7. Disassemble the battery fixed mounting.

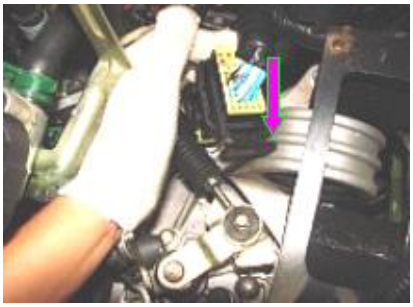
1.2. The installation steps are reverse to those for removal..

2. Removal of harness

2.1. Disassemble the joints of all connectors of the engine harness.

2.1.1. Disassemble the connector that connects the electronic fuel injection harness with the ECU wiring harnes.

The removal can be carried out by pulling out the clip as shown in the figure, and then the connector can be removed.



2.1.2. Disassemble the electronic throttle connector.

2.1.3.The ignition coil connector can be diassembled by pressing at the place shown in the right figure.

2.1.4. Disassemble the camshaft sensor connector.

2.1.5. Disassemble the carbon canister solenoid valve connector.

2.1.6. Disassemble the inlet pressure sensor connector.

2.1.7. Disassemble the recharging display connector.

2.1.8. Disassemble the generator connector.

2.1.9. Disassemble the starter connector.

2.1.10. Unplug the air-conditioning compressor connector.

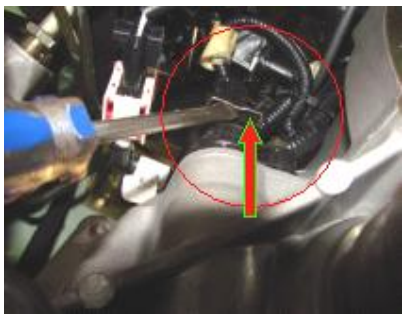
2.1.11. Disassemble the power steering pump connector.

2.1.12. Disassemble the knock sensor connector.

2.1.13. Disassemble the reverse light switch connector.

2.1.14. Disassemble the water thermostat connector.

2.1.15. Disassemble the front/rear oxygen sensor connector. Simply pull out the red lid on the connector as shown in the figure.



2.1.17. Disassemble the vehicle speed sensor connector.
Use a flat head screwdriver to pry open the clips on the connector and then pull it out.

2.1.18. Disassemble the engine rotation speed sensor connector.

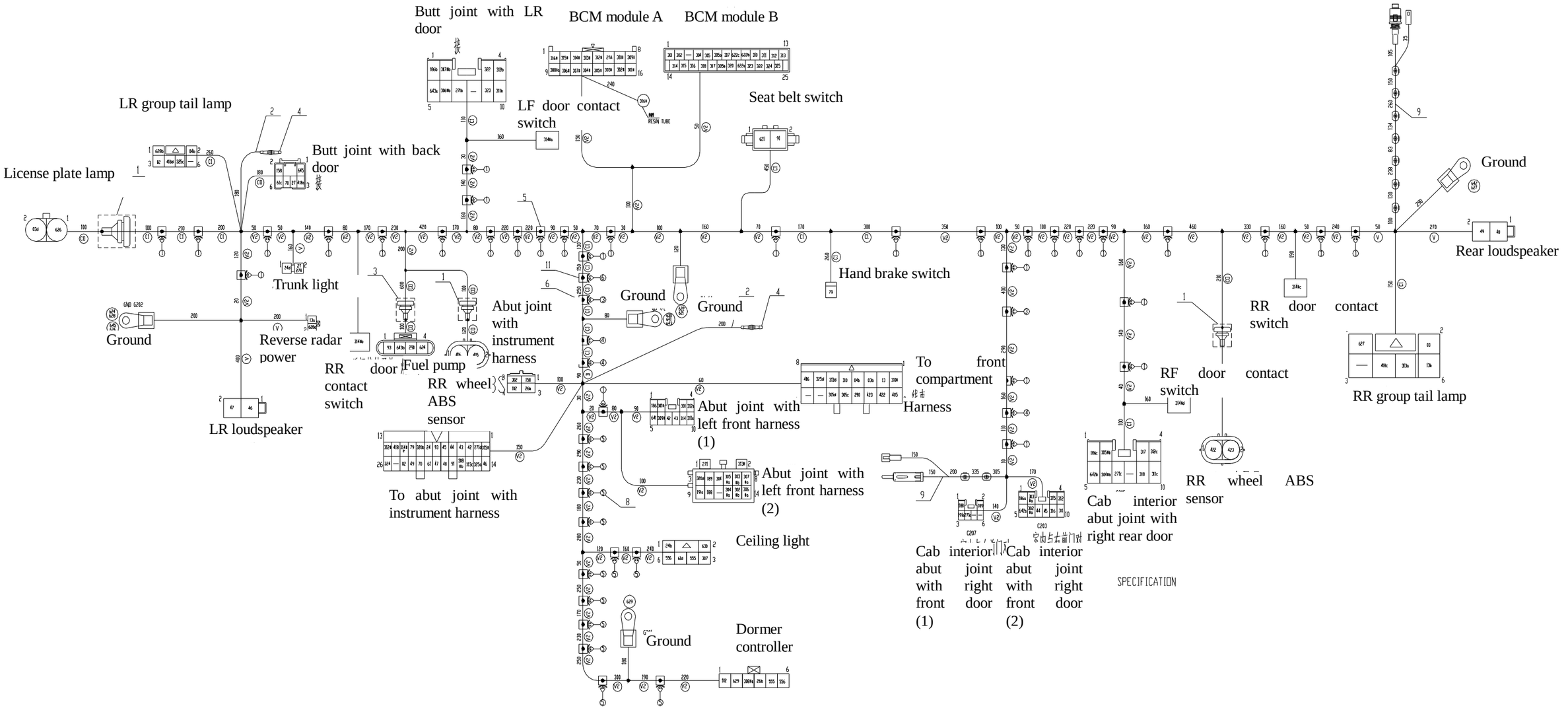
2.1.19. Take out the electronic fuel injection harness assembly.

2. Installation of harness

The installation steps are reverse to those for removal..

Section IV In-door Harness:

I. Harness Sketch



III. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	License plate lights connector	2	License plate lights harness	
2	Left-rear combination tail light connector	10	Left-rear combination tail light harness	
3	Trunk light connector	2	Trunk light harness	
4	Left-rear speaker connector	2	Left-rear speaker harness	
5	Fuel pump connector	4	Fuel pump harness	
6	Right-rear speaker connector	2	Right-rear speaker harness	
7	Right-rear combination tail tights connector	6	Right-rear combination tail lights harness	
8	BCM Module A connector BCM Module B connector	16 25	BCM Module A harness BCM Module B harness	
9	Hand brake switch connector	1	Hand brake switch harness	
10	Ceiling light connector	6	Ceiling light harness	
11	Seat belt switch connector	2	Seat belt switch harness	
12	Connect the instrument harness butt joint	26	Butt jointed with instrument harness	
13	Butt jointed with instrument harness	4	Butt jointed with instrument harness	
14	To front compartment harness connector	16	To front compartment harness	
15	Left-rear wheel ABS sensor connector	2	Left-rear wheel ABS sensor harness	
16	Right-rear wheel ABS sensor connector	2	Right-rear wheel ABS sensor harness	
17	Reverse radar power connector	2	Reverse radar power harness	
18	Butt jointed with tail door harness	6	Butt jointed with tail door harness	
19	Ground	1	Connected with ground wire	Inside the left C-pillar inner shield
20	Left-rear door contact switch connector	1	Left-rear door contact switch harness	
21	Right-rear door contact switch connector	1	Right-rear door contact switch harness	
22	Ground	1	Connected with ground wire	Inside the right C-pillar inner shield
23	Connector to front door harness butt joint 1	10	Front door harness butt joint 1	
24	Connector to front door harness butt joint 2	14	Front door harness butt joint 2	
25	Connector to interior and right-front door butt joint 1	6	Interior and right-front door butt joint 1	
26	Connector to interior and right-front door butt joint 2	10	Interior and right-front door butt joint 2	
27	Right-front door contact switch connector	1	Right-front door contact switch harness	
28	Left-front door contact switch connector	1	Left-front door contact switch harness	
29	Forming butt-joint with left-rear door harness	10	Forming butt-joint with left-rear door harness	
30	Interior forming butt-joint with right-rear door	10	Interior forming butt-joint with right-rear door	
31	Ground	1	Connected with ground wire	In the carpet under below left A-pillar
32	Ground	1	Connected with ground wire	On the left of BCM module box
33	Ground	1	Connected with ground wire	In the left ceiling handle
34	Dormer controllerconnector	6	Sunroof controller harness	

III. Removal and Installation of In-door harness

Part number: S12-3724050

(I). Preparations

Tools: sleeve wrench, cross head screwdriver, flat head screwdriver

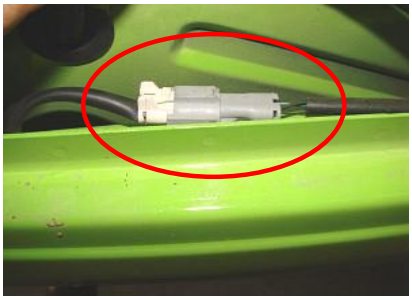
(II). Notes

When disassembling the electrical components and harness, make sure to disconnect the power supply.
The ignition switch must be OFF.

(III). Removal Steps

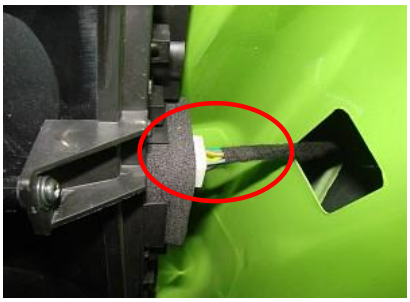
1. Removal of license plate light harness.

1.1. Disassemble the rear bumper assembly. (See Removal and Installation of Rear Bumper)
1.2. Unplug the plug of the license plate light harness.



2. Removal of left-rear group tail Llights harness

2.1. Disassemble the left-rear group tail lights assembly. (See Removal and Installation of Left-rear Combination Tail Lights)
2.2. Unplug the plug of the left-rear combination tail lights harness.



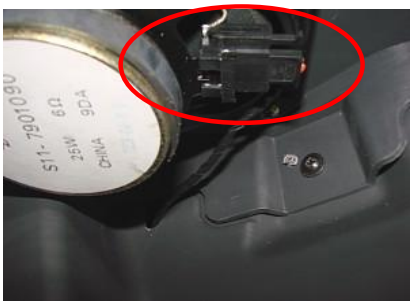
3. Use a flat head screwdriver to pry off the luggage light, and unplug the luggage light harness.

4. Unplug the plug of the left-rear speaker harness.

5. Removal of fuel pump harness.

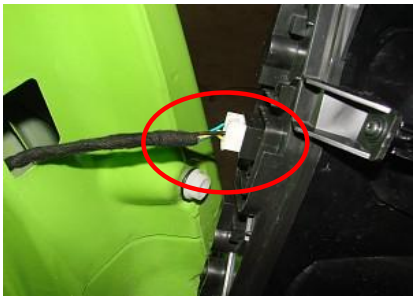
5.1. Pull off the right-rear seat, and take down the plastic cover on the fuel pump.
5.2. Unplug the fuel pump harness plug.

6. Unplug right-rear speaker harness plug.



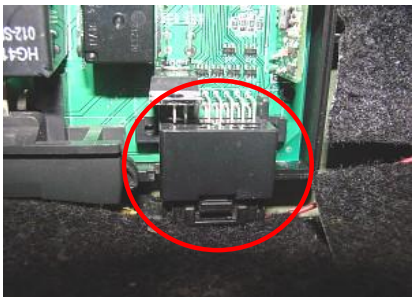
7. Disassemble the right-rear combination tail light harness.

7.1. Disassemble right-rear combination tail lights assembly. (See Removal and Installation of Right-rear Combination Tail Lights)
7.2. Unplug the right-rear combination tail lights harness plug.

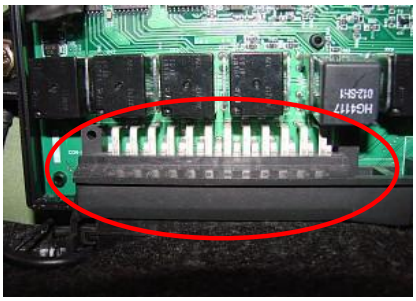


8. Removal of BCM MODULE.

8 . 1 . Open BCM module box.
8 . 2 . Unplug the BCM module A plug.



8 . 3 . Unplug the BCM Module B plug.

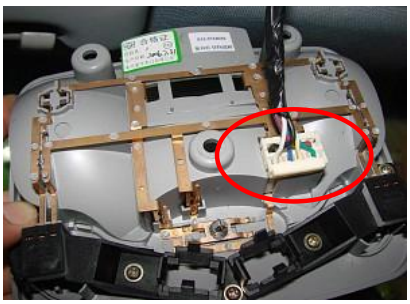


9 . Removal of hand brake harness

9 . 1 . Disassemble the auxiliary Instrument Panel assembly. (See Removal and Instalaltion of Auxiliary Instrument Panel)
9 . 2 . Unplug the hand brake harness plug.

10. Removal of ceiling light harness.

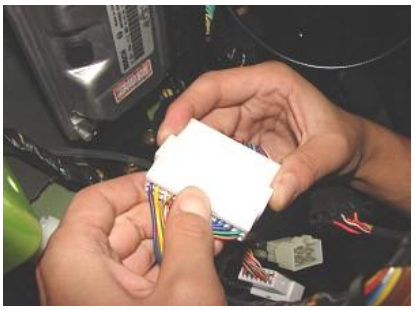
10. 1 . Disassemble the ceiling light. (See Removal and Installation of Ceiling Light)
10. 2 . Unplug the ceiling light harness plug.



11. Unplug the seat belt switch harness plug.

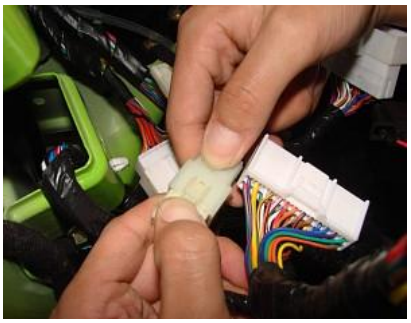
12. Removal of instrument harness butt joint

12. 1 . Disassemble the Instrument Panel. (See Removal and Installation of Instrument Panel)
12. 2 . Unplug the instrument harness butt joint.



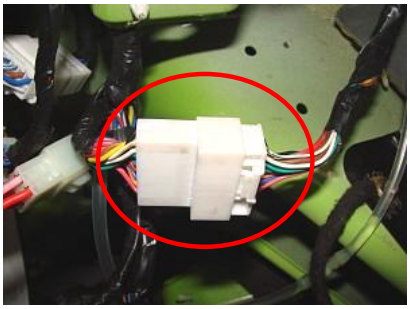
13. Removal of instrument harness butt joint

13. 1 . Disassemble the Instrument Panel. (See Removal and Installation of Instrument Panel)
13. 2 . Unplug the instrument harness butt joint.



14. Removal of front compartment harness connector.

14. 1 . Disassemble the Instrument Panel. (See Removal and Installation of Instrument Panel)
14. 2 . Unplug the front compartment harness plug.



15. Removal of left-rear wheel ABS sensor harness

15.1. Raise the vehicle by hoister. (Take care of your safety)
15.2. Unplug the left-rear wheel ABS sensor connector.

16. Removal of right-rear wheel ABS sensor harness.

16.1. Raise the vehicle by hoister. (Take care of your safety)
16.2. Unplug the right-rear wheel ABS sensor connector.

17. Removal of reverse radar power harness

17.1. Use a cross head screwdriver to remove the left C-pillar inner shield.

17.2. Unplug the reverse radar power plug.

18. Removal of the tail door harness' butt jointed harness.

18.1. Disassemble the left C-pillar inner shield.

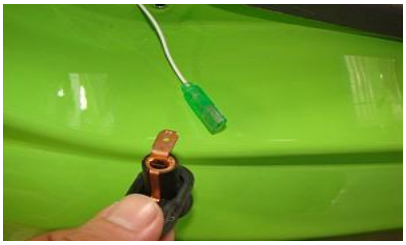
18.2. Unplug the tail door harness' butt jointed harness.

19. Disassemble the ground.

20. Removal of right-rear door contact switch harness

20.1. Open the right-rear door and disassemble the crews that fix the contact switch with a cross head screwdriver, and then take off the right-rear door contact switch.

20.2. Unplug the right-rear door contact switch plug.

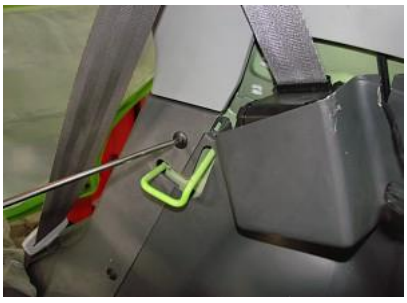


21. Removal and removal of left-rear door contact switch harness

21.1. Open the left-rear door and disassemble the crews that fix the contact switch with a cross head screwdriver, and then remove left-rear door contact switch.

21.2. Unplug the left-rear door contact switch plug.

22. Disassemble the rigth C-pillar inner shield and then disassemble the ground wire.



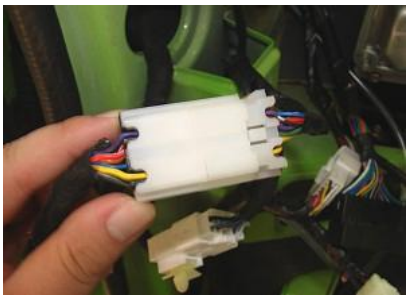
23. Removal of left-front door harness butt joint 1.

23.1. Disassemble the left A-pillar inner shield, and push down the plastic lock that fixed the connector of the left-front door harness butt joint 1. (See Removal of A-pillar inner shield)
23.2. Unplug the plug of the left-front door harness butt joint 1.

24. Removal of the left-front door harness butt joint 2.

24.1. Disassemble the left A-pillar inner shield, push down the plastic lock that fixes the connector of left-front door harness butt joint 2. (See Removal of A-pillar Inner Shield)

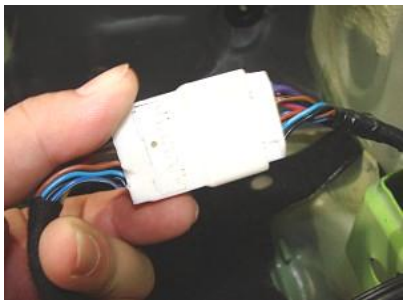
24.2. Unplug the plug of left-front door harness butt joint 2.



25. Removal of interior and right-front door butt joint 1.

25.1. Disassemble the right A-pillar inner shield, and push down the plastic lock that fixes the right-front door harness butt joint 2. (See Removal of A-pillar Inner Shield)
25.2. Unplug the plug of right-front Door harness butt joint 1.

26. Removal of interior and right-front door butt joint 2.



26.1. Disassemble the right A-pillar inner shield, push down the connector plastic lock that fixes the right-front door harness butt joint 2. (See Removal of A-pillar Inner Shield).
26.2. Unplug the plug of Right-front Door harness butt joint 1.

27. Removal of right-front door contact switch harness.

27.1. Use a cross head screwdriver to loosen off the screws that fix the right-front door contact switch, and then remove the right-front door contact switch.

27.2. Unplug the right-front door contact switch plug.

28. Removal of left-front door contact switch harness.

28.1. Use a cross head screwdriver to loosen off the screws that fixes the left-front door contact switch, and then remove the left-front door contact switch.

28.2. Unplug the left-front door contact switch plug.

29. Removal of the harness butt jointed with the left-rear door harness.

29.1. Disassemble the left B-pillar inner shield. (See Removal and Installation of B-pillar Inner Shield)
29.2. Push down the plastic clips that fixes the harness connector butt jointed left-rear door harness, and then unplug the harness plug that butt joints the left-rear door harness.

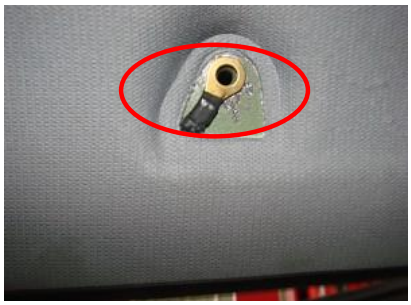
30. Removal of the Interior and right-rear door butt jointed harness

30.1. Disassemble the right B-pillar inner shield. (See Removal and Installation of B-pillar Inner Shield)
30.2. Unplug the harness plug butt jointed with the interior and right-rear door.

31. Disassemble the ground wire.

32. Disassemble the screws that fix the BCM module, and then disassemble the ground wire.

33. Use a cross head screwdriver to remove the left vehicle ceiling handle, and then disassemble the ground wire.



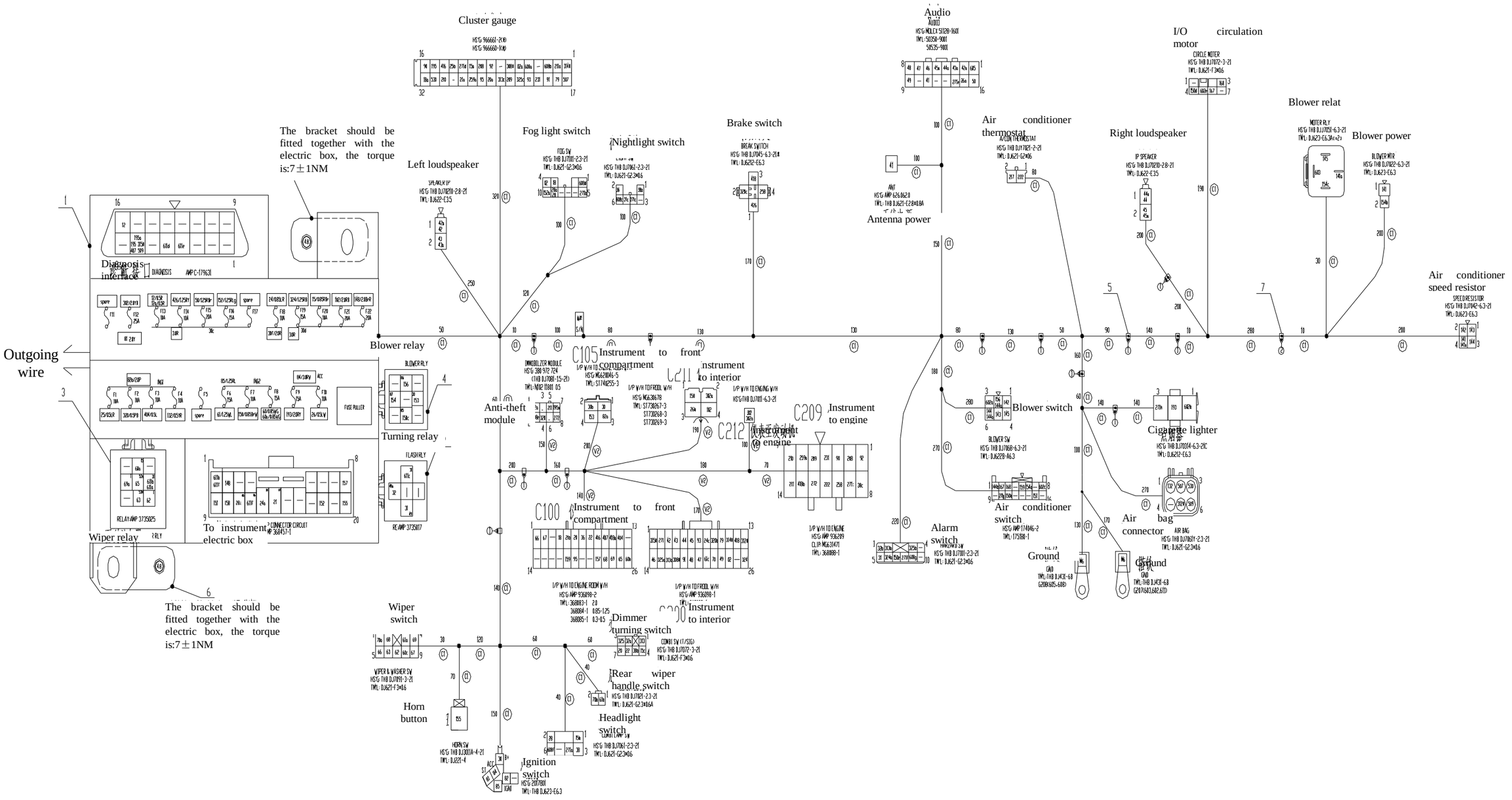
34. Removal of sunroof controller harness.

34.1. Disassemble the left vehicle ceiling. (See Removal and Installation of Vehicle Ceiling)
34.2. Remove the sunroof controller harness plug.
(Note: Optional for some vehicle types and the sunroof controller connectors are reserved for this vehicle type.)

35. Installation of In-door harness. (The steps are reverse to those for removal)

Section V Removal and Installation of Instrument Panel Harness

I. Harness sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection
1	Combination instrument connector	1	Instrument to interior
		2	Anti-sheft module →instrument to engine
		3	Ground
		4	——
		5	Ground
		6	Fog lights →c200 (instrument to interior)
		7	C200 (instrument to interior)
		8	——
		9	C209 (instrument to engine)
		10	C209 (instrument to engine)
		11	Instrument electric box
		12	Instrument to interior (c200)
		13	Ignition switch (IGN1)
		14	C100 (instrument to front compartment)
		15	Trouble diagnosis socket
		16	C209 (instrument to engine)
		17	Air bag
		18	C209 (instrument to engine)
		19	C200 (instrument to interior)
		20	C209〔instrument to engine〕
		21	C200 〔instrument to interior 〕
		22	Headlight switch
		23	C209 (instrument to engine)
		24	Headlight switch
		25	C100〔instrument to front compartment 〕
		26	C100〔instrument to front compartment
		27	C209〔instrument to engine〕
		28	Instrument electric box
		29	——
		30	C209〔instrument to engine〕
		31	Air bag
		32	Fog lights switch →instrument to front compartment
2	Left loudspeaker connector	1	Audio system C200 (instrument to interior)
			C200(instrument to interior) Audio system
3	Fog light switch connector	1	Ground
		2	——
		3	C100 〔instrument to front compartment〕
		4	C200(instrument to interior)
		5	C200 (instrument to interior)
		6	——
		7	——
		8	——
		9	Headlight switch Instrument electric box

		10	Instrument electric box connector → instrument electric box
4	Nightlight switch connector	1	Headlight switch
		2	C100 〔instrument to front compartment 〕
		3	——
		4	C200 (instrument to interior)
		5	Instrument electric box
		6	Ground
5	Brake light switch connector	1	Instrument electric box
		2	Ignition switch (IGN1)
		3	C200 (instrument to interior)
		4	C209〔instrument to engine〕
6	Audio system connector	1	Ground
		2	C200 instrument to interior
		3	Speaker
		4	Speaker
		5	Speaker
		6	Speaker
		7	C200 (instrument to interior)
		8	C200 (instrument to interior)
		9	C200 (instrument to interior)
		10	——
		11	ANT
		13	——
		14	——
		15	C200 (instrument to interior)
		16	C200 (instrument to interior)
7	Antenna power connector	1	ANT
8	Air-conditioner thermostat connector	1	C209 〔instrument to engine〕
		2	C209 〔instrument to engine〕
9	Right loudspeaker connector	1	Audio system C200 (instrument to interior)
		2	C200 (instrument to interior) Audio system

10	Inside/outside motor connector	1	——
		2	——
		3	A/C switch
		4	Ignition switch (IGN2)
		5	Ground
		6	A/c switch
		7	——
11	Blower relay connector	1	Ground
		2	Blower switch
		3	Speaker resistor
		4	Ground
12	Blower power supply connector	1	Air-conditioner reconditionang
		2	Blower relay
13	Air-conditioner reconditionang connector	1	Blower switch
		2	Blower switch
		3	Blower switch
		4	Blower power supply Blower relay connector
14	C105 instrument to front compartment connector	1	Ignition switch
		2	Ignition switch
		3	Ignition switch
		4	Blower relay
15	C100 instrument to front compartment connector	1	Windshield washing switch
		2	Windshield washing switch
		3	——
		4	Fog light switch
		5	To Instrument electric box connector
		6	Headlight switch
		7	Nightlight switch
		8	Headlight switch
		9	Instrument panel plug
		10	Trouble diagnosis socket
		11	Brake light switch
		12	Ignition switch(IGN1)
		13	——
		14	——
		15	——
		16	——
		17	——
		18	A\C switch
		19	——Instrument panel connector
		20	——
		21	——

		22	To instrument electric box connector
		23	Wiper switch
		24	Wiper switch
		25	Wiper switch
		26	Ignition switch(IGN1)
16	C211 instrument to interior connector	1	To instrument electric box connector
		2	C212 instrument to engine
		3	Ignition switch(acc)
		4	Instrument electric box
17	C200 instrument to front compartment connector	1	Trouble diagnosis socket
		2	Ground
		3	Left loud speaker
		4	Left loud speaker
		5	Right loud speaker
		6	Right loud speaker
		7	Instrument panel plug
		8	Instrument panel electric box
		9	Ignition switch(IGN1)
		10	Instrument panel plug
		11	Instrument panel plug
		12	Brake light switch
		13	Air bag
		14	Audio system
		15	Light group switch
		16	Light group switch
		17	Instrument panel plug
		18	Instrument panel plug
		19	Audio system
		20	Audio system
		21	Ignition switch(IGN2)
		22	Wiper switch
		23	Audio system
		24	Fog light switch
		25	——
		26	Alarm switch

18	C212 instrument to engine connector	1	Instrument electric device box C211
19	C209 instrument to engine connector	1	Instrument panel to plug
		2	Instrument panel to plug
		3	Instrument panel to plug
		4	Instrument panel to plug
		5	Instrument panel to plug
		6	Instrument panel to plug
		7	Instrument panel to plug
		8	Headlight switch
		9	Nightlight switch
		10	Brake light switch
		11	Air-conditioner thermostat
		12	Air-conditioner thermostat
		13	Brake light switch
		14	Anti-sheft module
20	Anti-sheft module connector	1	Instrument electric device box
		2	Ground
		3	——
		4	Ignition switch(IGN1)
		5	C209〔instrument to engine〕
		6	——
		7	Failure diagnosis socket → instrument panel plug
		8	C20〔instrument to engine〕
21	Wiper switch connector	1	C200 (instrument to interior)
		2	C100 (instrument to front compartment)
		3	Ignition switch(IGN2)
		4	C100 (instrument to front compartment)
		5	C100(instrument to front compartment)
		6	Wiper relay
		7	Wiper relay
		8	Ignition switch(IGN2)
		9	C100 instrument to front compartment

22	Speaker button	1	Instrument electric box
23	Ignition switch connector	1	C100 (instrument to front compartment)
		2	Instrument electric box
		3	Ground
		4	(ACC) auxiliary electrical equipment bus
		5	Ignition switch(IGN2)
24	Headlights switch connector	1	Instrument electric box
		2	Fog light switch
		3	Ground
		4	C200 (instrument to interior)
		5	——
		6	Ground
25	Rear wiper handle switch connector	1	Ignition switch(IGN2)
		2	C200 (instrument to interior)
26	Dimmer steering switch connector	1	Ground
		2	Steering relay
		3	Ground
		4	Instrument electric box
		5	Ground
		6	C100 (instrument to front compartment)
		7	C100(instrument to front compartment)
27	Alarm switch connector	1	Steering relay
		2	Dimmer steering switch connector
		3	Dimmer steering switch connector
		4	——
		5	Steering relay
		6	Instrument electric box
		7	Ignition switch(IGN2)
		8	C200 (instrument to interior)
		9	Ground
		10	——
28	Blower switch connector	1	Air-conditioner reconditionang
		2	Blower relay
		3	Ground
		4	Blower relay
		5	Air-conditioner reconditionang
		6	Air-conditioner reconditionang

29	Air-conditioner switch connector	1	Blower switch → air-conditioner reconditionang
		2	Inside/outside circulation motor
		3	Inside/outside circulation motor
		4	——
		5	C100(instrument to front compartment)
		6	Blower relay
		7	——
		8	Ground
		9	——
		10	C200 (instrument to interior)
		11	Ignition switch(IGN2)
		12	——
		13	——
		14	——
		15	To instrument electric box
		16	——
30	Cigar lighter	1	Ground wire
		2	Ignition switch(ACC)
		3	C200 (instrument to interior)
31	Air bag connector	1	Ignition switch(IGN1)
		2	Instrument panel plug
		3	Instrument panel plug
		4	——
		5	C200(instrument to interior)
		6	Trouble diagnosis socket
32	Trouble diagnosis socket	1	——
		2	——
		3	——
		4	Ground
		5	Ground
		6	——
		7	Anti-sheft module connector Instrument panel plug C200(instrument to interior) C100(instrument to front compartment) Air bag
		8	——
		9	——
		10	——
		11	——
		12	——
		13	——

		14	——
		15	——
		16	Instrument electric box
33	Wiper relay	1	——
		2	
		3	——
		4	
		5	
		6	
		7	——
		8	
		9	
34	To instrument electric box connector	1	Wiper relay
		2	Instrument electric box
		3	——
		4	——
		5	——
		6	——
		7	——
		8	C100 (instrument to front compartment)
		9	Air-conditioner temperature switch connector
		10	C211 (instrument to interior)
		11	Fog lights switch connector Ignition switch (IGN2)
		12	——
		13	Instrument electric box C105(instrument to front compartment)
		14	Ground
		15	——
		16	——
		17	——
		18	Instrument electric box
		19	——
		20	Speaker button

35	Blower relay	1	——
		2	Blower switch
		3	——
		4	Ground
		5	——
		6	C105 (instrument to front compartment)
		7	——
		8	Ignition switch(IGN2)
		9	——
36	Steering relay	1	Ground Alarm switch
		2	Ground
		3	——
		4	——
		5	Alarm switch Audio system→C200 (instrument to interior)

III. Removal and Installation of Instrument Panel Harness

(I). Preparation of Tools

Tools: 10＃/13＃sleeve wrench, cross head screwdriver, flat head screwdriver

(II). Notes

(1) When disassembling the electrical components and harness, the power supply should be disconnected.
(2) Make sure the ignition switch is OFF.
(3) When disassembling common connectors, push down the latch device on the connector, and then separate the plug from the socket by force, but do not pull at the wires so as not to damage the wires and connectors.

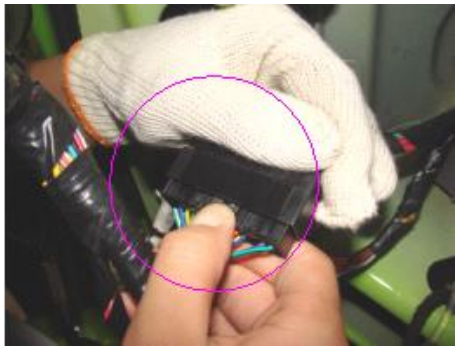
(III). Removal and installation of instrument panel harness

1.1. Removal of Instrument harness
1.1.1. Disassemle the auxiliary instrument panel, and when disassembling the instrument panel, the cigarette lighter connector, blower switch connector, air-conditioner switch connector, air-conditioner thermostat connector, audio system connector, antenna power supply plug, alarm switch connector and safety airbag socket will also be disassembled.. The safety airbag socket is a reserved function, and there are 2 grounds under the console, which can be disaasembled with a 10# sleeve. See Removal of Instrument Panel for detailed removal methods.

1.1.2. Removal of the steering wheel will also involve removal of speaker button connector, wiper switch connector, dimmer steering switch connector, rear wiper switch connector, headlight switch connector, ignition switch connector, nightlight switch connector and fog light switch connector. See Removal of Instrument Panel for detailed removal methods.

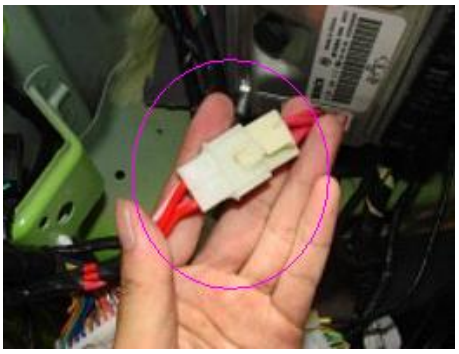
1.1.3. When disassembling the combination instrument, please disassemble the harness plug connectede with the combination instrument. See Removal of Instrument Panel for detailed removal methods.

1.1.4. Unplug the left-right loudspeaker and the brake switch connector.

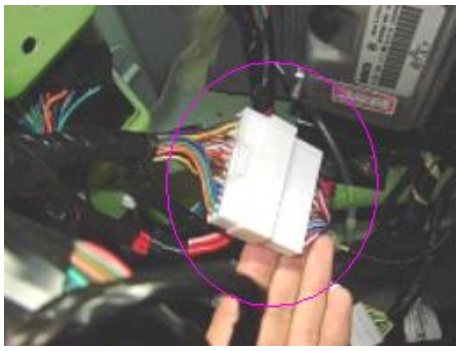


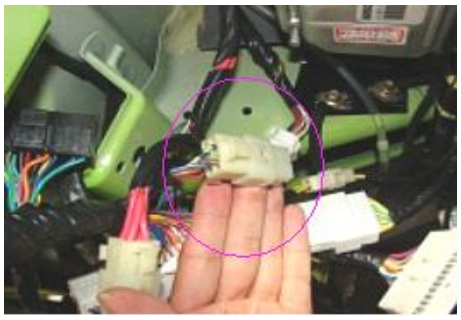
1.1.5. When disassembling the instrument panel crossbeam, please disassemble the inside/outside circulation motor connector of the air-conditioner evaporator, blower power supply connector, blower relay connector, air-conditioner reconditionang connector and anti-theft module connector. See Removal of Evaporator for detailed removal methods.

1.1.6. Disassemble the two connectors of the instrument harness and the front compartment harness, as shown in the right figures:

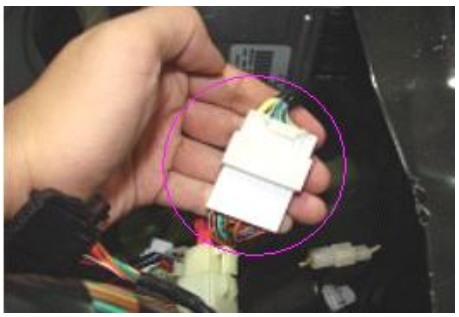


1.1.7. Disassemble the two connectors of the instrument harness and the interior floor harness, as shown in the right figures:

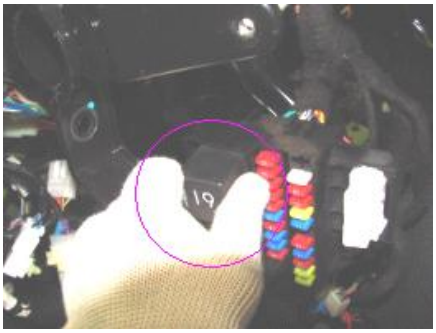




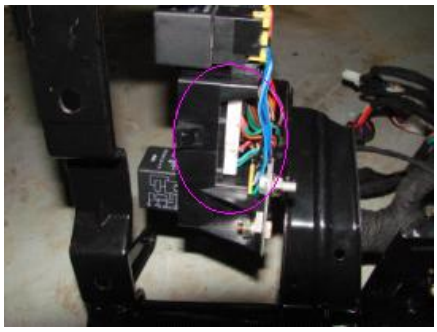
1.1.8. Disassemble the two connectors of the instrument harness and the engine wiring harnes, as shown in the right figures:



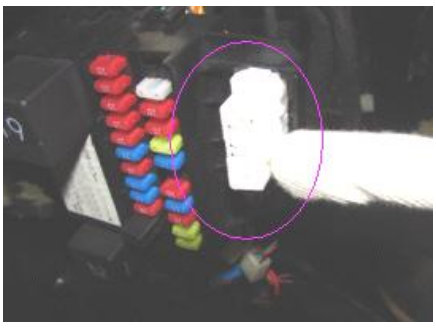
1.1.9. Unplug the blower relay, steering relay, and wiper relay, as shown in the right figures:



1.1.10. Unplug the instrument electric box connector as shown in the right figures:



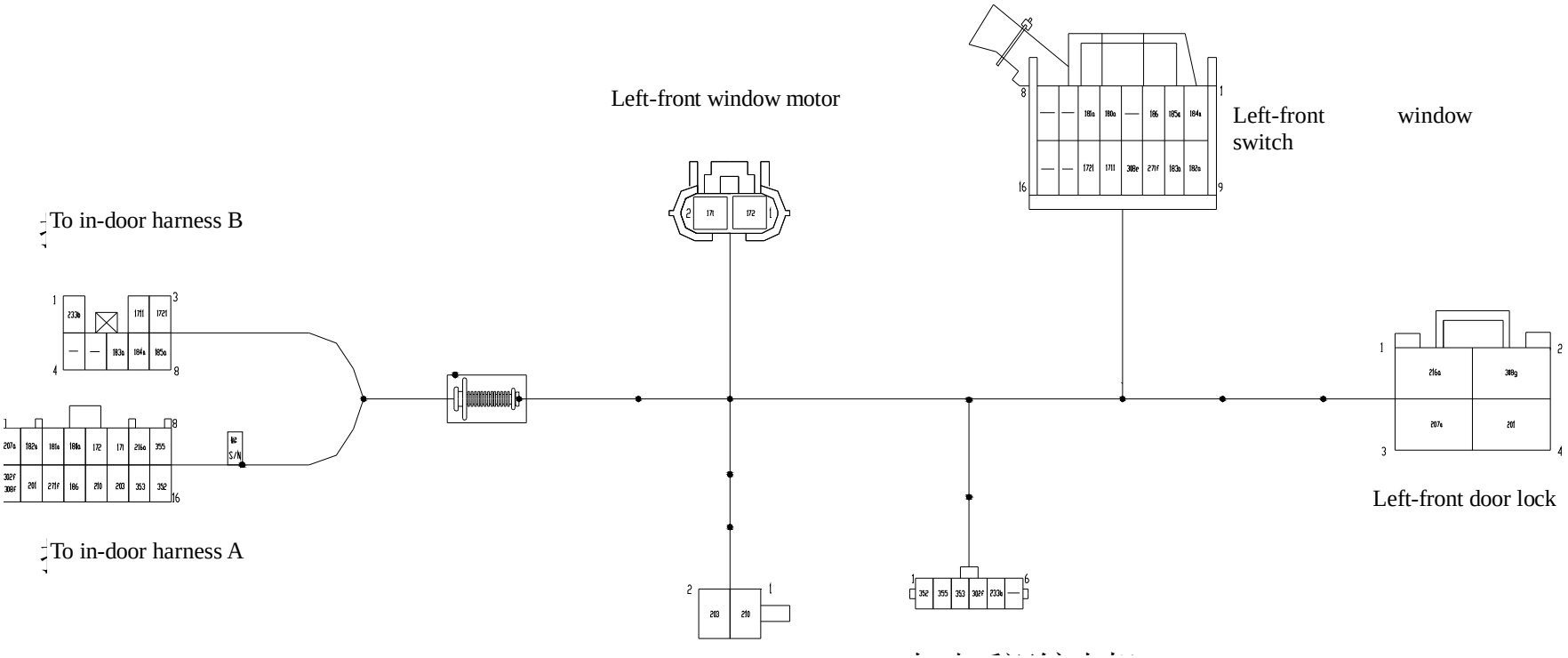
1.1.11. Here is the failure diagnosis socket.



2. Installation of instrument panel harness
The installation steps are reverse to those for removal

Section VI Left-front Door Harness

I. Harness Sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	To in-door harness B connector	10	In-door harness B	
2	Left-front window motor connector	2	Left-front window motor	
3	Left-front window switch connector	16	Left-front window switch	
4	To in-door harness A connector	14	In-door harnessA	
5	Left-front speaker connector	2	Left/front speaker	
6	Power rearview mirror /left turning light connector	3	Power rearview mirror /left turning light	
7	Left-front door lock connector	4	Left-front door lock	
8	Left-front door remote control connector	2	Left-front door lock	

III. Removal and Installation of Left-front door in-door harness

Part number: S21-3724070

(I). Preparations

Tools: sleeve wrench, cross head screwdriver, flat head screwdriver

(II). Notes

When disassembling the electrical components and harness, please disconnect the power supply.
The ignition switch must be OFF.

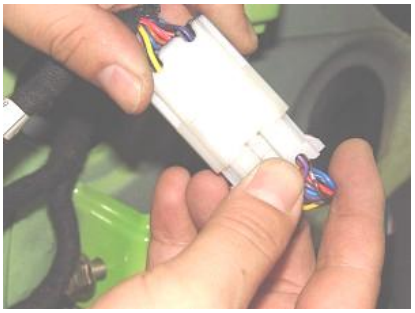
(III). Removal Steps

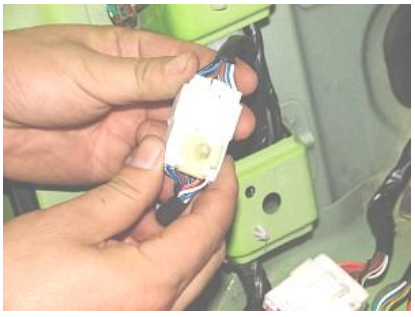
1. Removal
1.1. Disassemble inside door shield. (See Removal of Inside Door Shield)
1.2. Remove the inside door protecting film.
1.3 Unplug the left-front door remote control connector.

1.4. Unplug the door lock connector. (See Removal of Door Lock)
1.5. Unplug the outside left-front door rearview mirror harness connector.

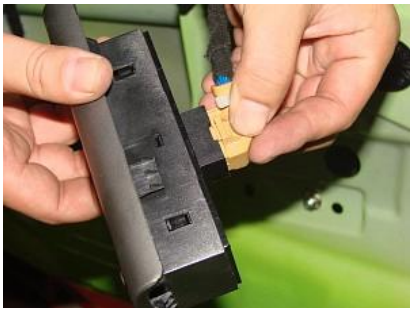
1.6. Unplug the left-front door speaker connector.

1.7. Unplug the two connectors that connect the left-front door in-door harness and interior floor harness. (See Removal of In-door harness)





1.8. Unplug the left-front window switch connector.



19. Unplug the left-front door lock connector.

2.0. Unplug the elevating motor connector.

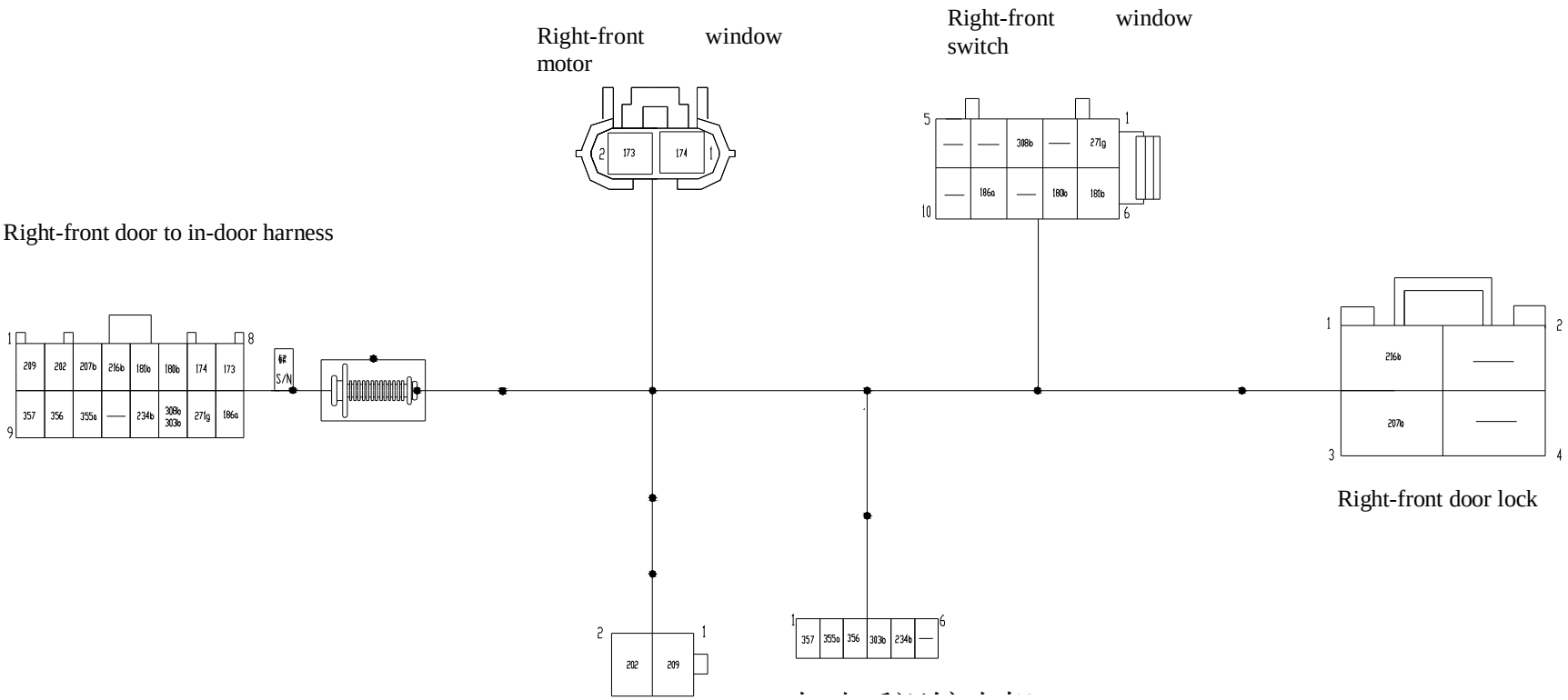
21. Unplug the inside door harness shield, and then remove the harness.

2. Installation.

The installation steps are reverse to those for removal..

Section VII Right-front Door Harness

I. Harness Sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	Right-front door in-door harness connector	16	In-door harness	
2	Right-front window motor connector	2	Right-front window motor	
3	Right-front window switch connector	10	Right front window switch	
4	Right-front door lock connector	4	Right-front door lock	
5	Right-front speaker connector	2	Right-front speaker	
6	Power rearview mirror motor / right turning light connector	6	Power rearview mirror motor / right turning light	

III. Removal and Installation of Right-front Door In-door Harness

Part number: S21-3724080

1. Removal

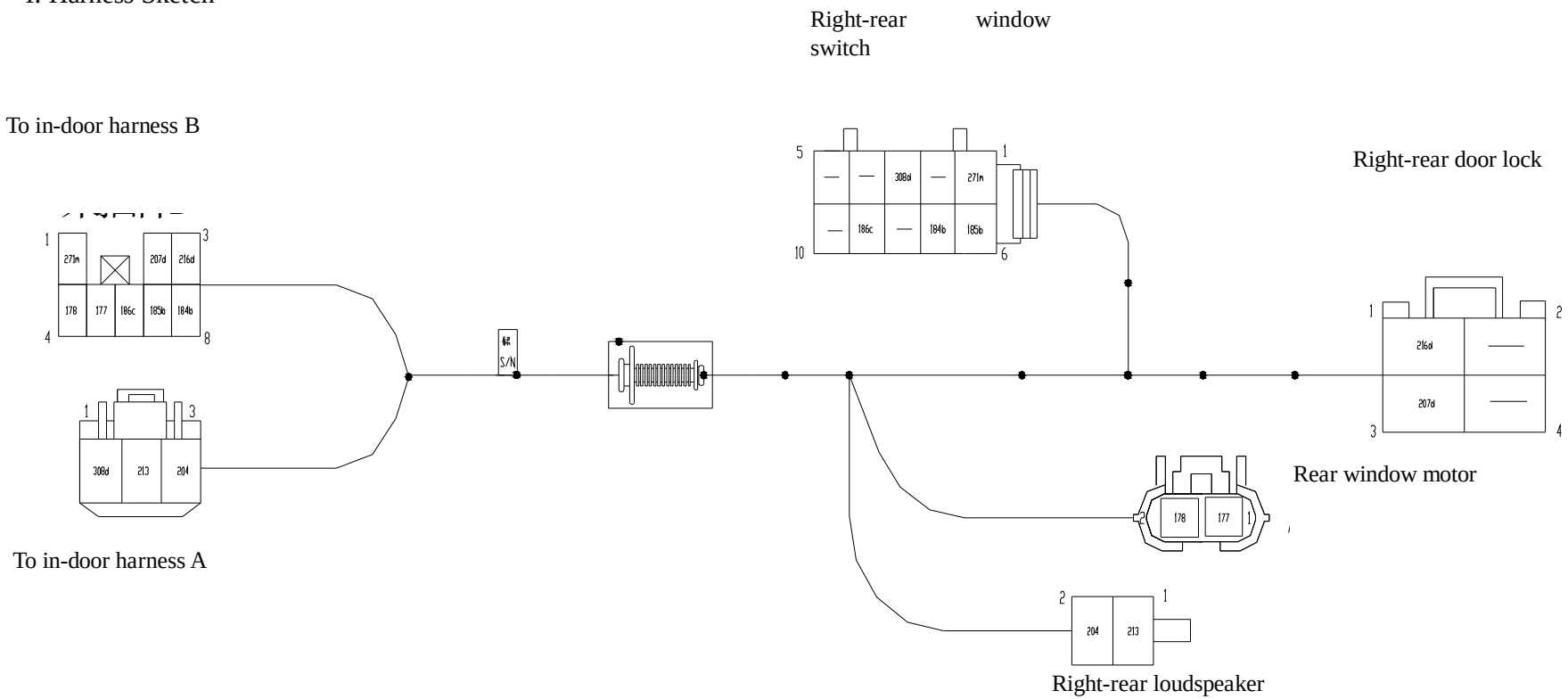
See Removal of Left-front Door In-door harness.

2. Installation

The installation steps are reverse to those for removal.

Section VIII Rear Door Harness

I. Harness Sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	Right-rear window switch connector	10	Right-rear window switch	
2	Right-rear door lock connector	4	Right-rear door lock	
3	To in-door harness connector A	10	In-door harness A	
4	Rear window motor connector	2	Rear window motor	

III. Removal and Installation of Right-rear Door In-door Harness

Part number: S21-3724180

(I). Preparations

Tools: sleeve wrench, cross head screwdriver, flat head screwdriver

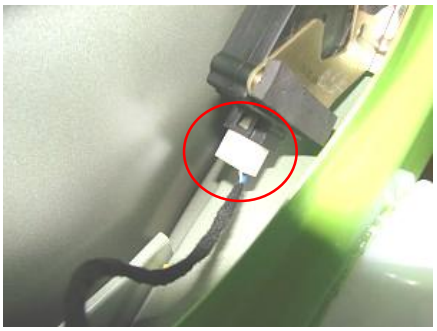
(II). Notes

When disassembling the electrical components and harness, please disconnect the power supply.
The ignition switch must be OFF.

(III). Removal Steps

1. Removal
1.1. Disassemble the rear inside door shield. (See Removal of Inside Door Shield)
1.2. And then remove the inside left-rear door protecting film.
1.3. Unplug right-rear window connector.

1.4. Unplug the door lock harness connector.



1.5. Unplug the elevating motor connector.

1.5. Disassemble the lower-right B-pillar shield. (See Removal and Installation of Door Shield)
1.6. Unplug the connector that connects the inside door harness and in-door harness.

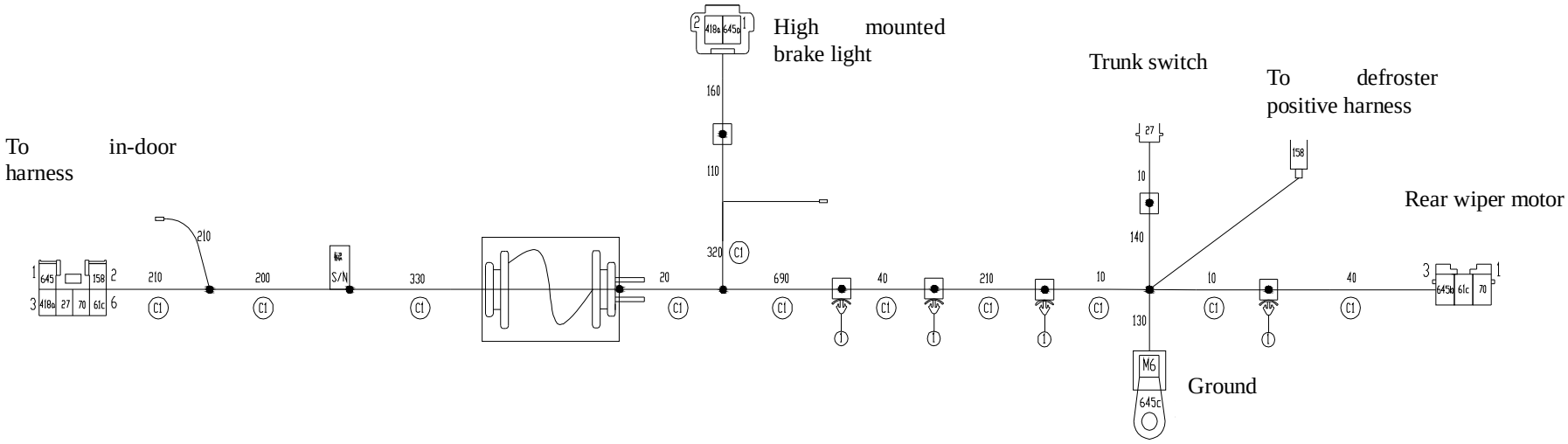
1.7. Unplug door contact switch connector.

1.8. Pull out the inside door harness protective rubber jacket, and take out the harness assembly from inside the door.

2. Installation
The installation steps are reverse to those for removal.
Note: See Removal of Right-rear Door Harness for details about the inside left-rear door harness.

Section IX Tail Door Harness

I. Harness Sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	To in-door harness connector	6	In-door harness	
2	High mount brake light connector	2	High mount brake light	
3	Trunk switch connector	2	Trunk switch	
4	To defroster positive harness connector	2	Defroster positive harness	
5	Rear wiper motor connector	3	Rear wiper motor	
6	Ground	1	Vehicle body plate work	On the tail door plate work

III. Removal and Installation of Tail Door In-door harness

Part number: S12-3724160

(I). Preparations

Tools: sleeve wrench, cross head screwdriver, flat head screwdriver

(II). Notes

1. Do not use too much force when getting the harness through the hole in the vehicle body plate work, or the harness may get damaged and result in short circuit.
2. When disassembling the electrical components and harness, please disconnect the power supply.
3. The ignition switch must be OFF.

(III). Removal and Installation Steps

1. Removal
1.1.1. Use a cross head screwdriver to remove the left C-pillar inner shield.
(See Removal of Vehicle Body Accessories)

1.1.2. Unplug the harness plug forming abutt-joint with the in-door harness.

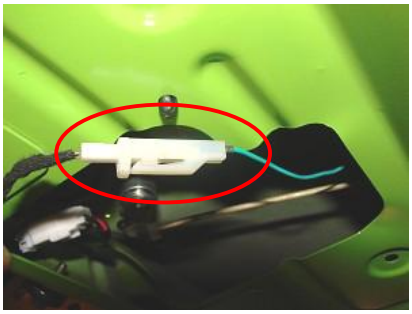
1.1.3. Disassemble the high mount brake light shield by hand.

1.1.4. Unplug the harness plug connecting the high mount brake light.

1.1.5. Use a flat head screwdriver to disassemble the tail door shield.

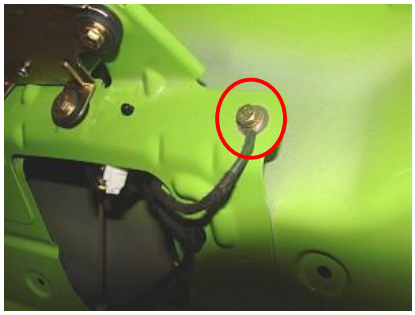
1.1.6. Unplug the rear defroster positive harness plug.

1.1.7. Unplug the trunk switch plug.



1.1.8. Unplug the rear wiper motor plug.

1.1.9. Disassemble the vehicle body ground wire. (On the tail door)



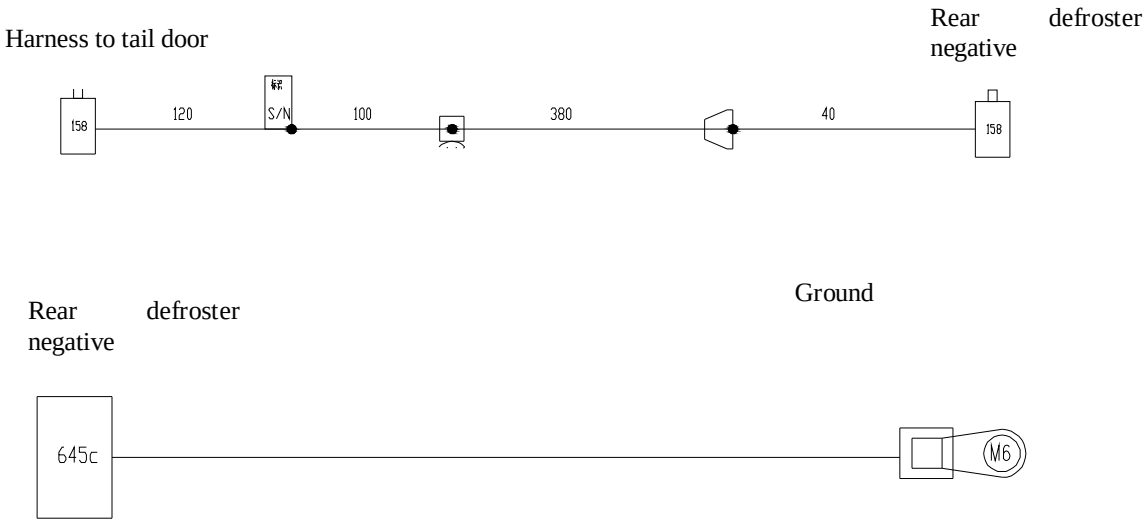
1.1.10. Removal of tail door in-door harness

2. Installation

The installation steps are reverse to those for removal, and special auxiliary tools (thin steel wire) can be used to accomplish it.

Section X Defroster Harness

I. Harness Sketch



II. Instructions on Main Connectors

No	Connector Name	Pins	Connection	Remark
1	Defroster positive connector	1	Defroster positive	
2	Defroster negative connector	1	Defroster negative	
3	Tail door harness connector	1	Tail door harness	
4	Vehicle body ground wire	1	Vehicle body	On the tail door

III. Removal and Installation of Rear Defroster Harness

Defroster harness positive part number: S12-3724530
Defroster harness negative part number: S12-3724540

(I). Preparations

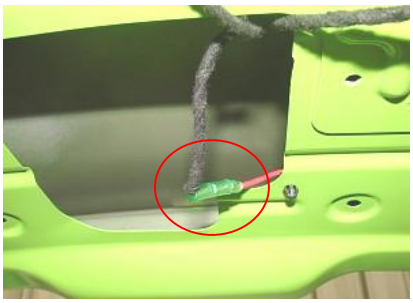
Tools: sleeve wrench, cross head screwdriver, flat head screwdriver

(II). Notes

When disassembling the electrical components and harness, disconnect the power supply.
The ignition switch must be OFF.

(III). Removal Steps

1. Unplug the defroster harness connector.



2. Unplug the left-rear defroster connector.

3 Unplug the right-rear defroster connector.

(IV) Installation Steps

The installation steps are reverse to those for removal.